United States Court of Appeals

for the Second Circuit

APPELLANT'S APPENDIX

76-6122

United States Court of Appeals

FOR THE SECOND CIRCUIT

Docket No. 76-6122

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COUNTY OF SUFFOLK, COUNTY OF NASSAU, TOWN OF ISLIP, TOWN OF HEMPSTEAD, TOWN OF NORTH HEMPSTEAD, TOWN OF OYSTER BAY, TOWN OF HUNTINGTON, and the BOARD OF TRUSTEES OF THE TOWN OF HUNTINGTON and CONCERNED CITIZENS OF MONTAUK, INC., *Appellees,*

—against—

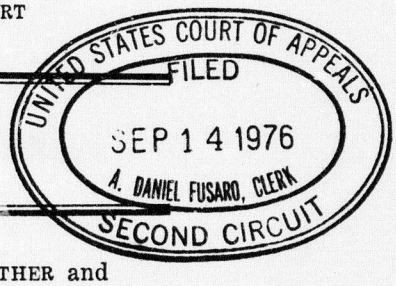
SECRETARY OF THE INTERIOR, ET AL., *Appellants,*
NATIONAL OCEAN INDUSTRIES ASSOCIATION, ET AL., and NEW YORK GAS GROUP, *Intervenor-Appellants.*

THE STATE OF NEW YORK and THE NATURAL RESOURCES DEFENSE COUNCIL, INC., *Appellees,*

—against—

THOMAS S. KLEPPE, Secretary of the Interior, *Appellant,*
NATIONAL OCEAN INDUSTRIES ASSOCIATION, ET AL., and NEW YORK GAS GROUP, *Intervenor-Appellants.*

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK



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FL:CR
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(After the recess.)

THE CLERK: The following maps have been marked for identification.

Map of Long Island habitats, will be marked number 49. Long Island Preservation areas number fifty.

Long Island Waterfowl areas 51.

Long Island Shellfish beds 52.

A composite of Exhibits 52 has been marked as Plaintiff's Exhibit 53 for identification.

(Documents so marked.)

CROSS EXAMINATION

BY MR. JENSEN:

Q Dr. McHugh, before we get into the substance of your oral testimony, I would like to ask you a few questions concerning these charts which are arrayed around the courtroom, which you used in connection with your testimony.

First of all, am I to understand that all of the data sources for these charges are to be found in one of the, what is it, six or seven books listed on this letter that's marked as Plaintiff's Exhibit number 47?

A Yes, all except the one by John Colton which was not used by the cartographer.

He didn't get to that one.

Q And I believe that you testified that at least two of these were published sometime subsequent to the preparation of this environmental impact statement?

A That's correct, they could not have been used because the time schedule was wrong.

Q And which two were those?

A Those are the two by Hennemuth, 1976, and Kendall, 1976.

They are on attachment dated 26 July, a memo from myself to Irving Like.

Q Well, I don't know what you're referring to, but the exhibit that I have has no such reference.

A Oh, it should have been -- it should have been attached. Perhaps I'd better tear this off and give that to the court.

MR. JENSEN: Shall we simply attach it to the exhibit that's already been submitted, Exhibit 47, since it was mentioned to be part of that exhibit?

THE COURT: Yes, just staple it. Put a clip on it.

THE WITNESS: But the -- the charts in the Hennemuth report could have been extracted from the last item on page two of the memo, the paper by

Grosseline, Byerdahl & Stearn, which contained essentially the same charts, and that was published in 1973. At least was available in 1973.

Q I realize this is going to be a somewhat laborious process, but I'd like you to identify going throug the charts individually which data source you used for which charts.

THE COURT: I don't want to that done for all of these charts.

What's the point of it?

MR. JENSEN: Well, your Honor, we have no idea how these visuals were prepared, where the data was obtained, what kind of data it was, whether it was data that was obtained by one ship going out and making a sampling on a particular day.

THE COURT: Well, take one or two charts and let's have him go through. Take this one closest to me, for example, which is 26 in evidence, and do it with that.

I'm not going to do it with all these charts.

THE WITNESS: This one shows their fall -- what they call their fallground fish surveys, which --

Q No, but my question is which data source was relied upon in the preparation of the chart?

A The data source comes from the National Fisheries Marine Service Laboratory at Woods Hole, Massachusetts.

Q But is it one of these publications in Exhibit 477

A Yes. Now, I have here the originals from the publications, the original charts which the cartographer used, and if you would like to have them I can make those available.

Q Well, perhaps you can tell us how these charts were prepared, did you physcially -

A How these actual charts were prepared?

Q Did you physically draw these charts yourself?

A These were drawn by a cartographer who works for Suffolk from the originals.

The reason he did them this way was simply that the originals were too small to be seen in the courtroom.

Q And who prepared the original charts?

A Who prepared the original charts? The authors of these particular papers.

Q So these charts were simply taken from these publications and overlayed on this map that comes from the --

A Right.

Q -- BLM?

A Yes.

Q Now, some of these charts -- and I refer now to Exhibit 32, a chart which is entitled "Larvae Atlantic Menhaden October," and then the caption reads "Larvae Shallow Tow.

Can you tell me how that data was acquired to prepare the chart?

A A tow of fine fish nets through the water. If it says that means somewhere near the surface and the net collects all the small living organisms that are in its path.

Then they preserve the material and usually examine it back in the laboratory, count the numbers of fish eggs and larvae of the different species, record them on -- in tables and then transfer this to charts and draw the contours.

Q So that all the data for this charge would have been acquired from one such tow trip?

A From one series of tows, yes.

Q How many tows?

A I don't know. I don't remember.

Q And the indication --

A Excuse me, a fairly large number.

Q But the indication on the chart is October. I presume, then, all of these tows were made during the month of October.

A That would be correct, yes.

Q And similarly for other charts where it gives a date or a month, would that also be an indication that that data was acquired in that specific month and year?

A At that particular time, and most of these cruises, as I recollect, last about two weeks. Some of them have been done in conjunction with the Soviet Union, so there is more than one vessel out there.

Q So that I can understand this, isn't it true particular for pelagic fish, that they are a migratory fish species and move around considerably?

A Right.

Q So that any of these tows or readings that were made with respect to those fish would be temporal in the sense that they would be limited to that particular time as to the location of the fish?

A Right.

Q Now, is it true that these fish necessarily return to the same areas at the same time the following year or in subsequent years?

A More or less.

Q But in addition to that kind of annual

migration is there not also a change throughout the ocean over time of where these pelagic fish are located?

A They don't go out beyond -- very much beyond the edge of the Continental Shelf. That is about 200 meters depth. So that that confines them.

The Gulf Stream confines them, it acts like a wall on the -- on the oceanside.

And the general pattern of migration is northward and in-shore in the summertime, the spring and summer, and southward and off-shore in the winter.

A good many of these species perform migrations like that.

Q For these charts to be really meaningful then for a person who had to make a decision about the possible effect of OCS activity, wouldn't the charts have to be compiled in some way so that you could see for the broad span of time?

A Oh, yes.

Q -- Where the fish would be located?

A Yes. These are not all the charts available by any means.

Obviously we couldn't handle that many, so we simply randomly took some charts that were available in publications that were in my personal library.

Q But for each chart that would provide a sliver of information that would be requested to understand the location and the migration pattern for the fish in the Mid-Atlantic region.

A That's right.

Q Is that correct?

A That's right.

Q Now, I believe you testified that you are familiar with the Fishery Conservationand Management Act of 1976.

Do you know when that Act was signed into law?

A It was signed by the president on. I think it was the 13th -- the 12th or 13th of April. 12th of April I think.

No, it was the 13th.

Q And do you know when the drafts and final impact statement for sale number 40 were prepared?

A Sometime earlier this year.

Q Were they not in fact prepared prior to the adoption of the statute that you referred to?

A I -- I think so, yes. Although the legislation was being considered by the Congress long before that.

MR. LIFF: Your Honor, I think the record

should indicate that the final environmental impact statement was issued in May 1976.

Did you misspeak on that?

MR. JENSEN: I said when they were pre-pared by if you want to take the stand and testify --

MR. LIKE: Well, no, this will -- this already should be in the record.

MR. BIALIK: Your HOnor, in volume one of the final environmental statement for sale number 40 it says that the final environmental statement was made available on May 25th, 1376.

MR. LIKE: That was my recollection also.

I just wanted to correct the record. It's not an objection.

MR. JENSEN: My question dealt with when it was prepared, not when it was published.

Q I believe you testified that one of the aspects of this new legislationwas to create eight regional management councils for fisheries.

A Yes.

Q What's the purpose of these councils?

A Their purpose is to implement the provisions of the Act in a sense of drawing up management plans for the fisheries in their particular area andsubmitting them

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them to the Secretary of Commerce for his approval.

Q And what will these management plans deal with?

A They will deal with these resources and all of the other living resources of value to the United States on the Continental Shelf.

Q Will the plans -- or should the plans, rather, contain recommendations concerning the amount of fishing that should be allowed in a given area?

A Yes, in essence they will be recommendations to the Secretary of Commerce as to what the total allowable catch is.

Q And are you aware of any provisions in that law which requires any coordination between the Secretary of Commerce and the Secretary of Interior as far as fisheries are related to outer Continental Shelf drilling activity?

A Yes, indeed. In fact, the Secretary of Interior will have a representative on each council, a non-voting representative.

Q And that would be in an effort to coordinate OCS activities with the commercial fisheries management plan?

A Yes.

Q Now, I think at several points in your direct

testimony you testified that there was data which was available that was not used in the Environmental Impact Statement; is that correct?

A Yes.

Q Can you tell us specifically what data you were referring to?

A These data here, for one.

Q Is this the total data that you said is lacking?

A No, not by any means. I have spot-checked a number of publications and -- publications that were pertinent to this issue and did not find them in the -- in the bibliography.

Q Well, can you tell us what other data is missing from the final EIS?

A What other data are missing?

Q Yes.

A Well, for one thing interpretations as to the condition of the -- of the fishery resources. This is almost purely descriptive and nothing is said about whether the resources are underfished, overfished or what.

Q I am speaking about data not interpretations. Is there any other data base which you feel is missing or was not used in this final for Sale 40 EIS?

A Yes, published papers, for example, which would -- would improve the Secretary's capability to make judgments.

Q Can you name some of these papers?

MR. LIKE: Please, may I ask that Mr. Jansen allow Professor McHugh, out of courtesy, to finish his answer? May we have him complete the last answer he was interrupted with?

THE WITNESS: No, I don't think so. I was -- I was finished.

BY MR. JANSEN:

Q Can you name some of these publications?

A Well, what I usually do -- and this will lead me into a trap maybe -- what I usually do in a case like this, since I know my own publications better than anybody else's, I simply consider what papers I have published that are germane to the issue.

Q And Have you published papers that were not considered or included in this?

A Yes, I find that one of my papers is referred to here but there are at least half a dozen others which could have been used.

It was not necessary that they would be used and my heart isn't broken because they weren't

referred to. It's just that it's one way of testing the adequacy of the literature search.

Q I think you testified that if this data had been included that it would assist the decision-maker in making a better decision.

A In my opinion, yes.

Q In what way would it do that?

A It would give him more -- more data and more understandings of the whole fishery question, which is very complex indeed, and the complexities don't come out in this document at all.

(continued next page.)

Q Well, what complexities are you referring to?

A Well -- well, for example, in the section that deals with social-political questions there is no mention of the very important social-political inputs into fishery management, which makes it very, very difficult to manage fisheries.

I think there was a great opportunity missed here to talk about that very complicated set of issues, support the fishermen, commercial fishermen controversies and the fact that most legislation is based upon opinion ratherthan fact, and so on.

This would help the Secretary to understand how these issues could be resolved and what the -- what the threats are.

Let me give you anexample to make this a little clearer. The Surf Clam Fishery, which is represented -- I can't read these numbers here but I can start from this one, Exhibit 27, 28 and 29. These show the progression of the Surf Clam Fishery over a period of three years, starting in 1971. And you will see -- this is 1971 -- that there was much more Surf Clam fishing going on off the New Jersey coast and near the New York bight in that year than there was in 1972 and by 1973 the fishery had

shifted down to the -- almost down to the Virginia coast, Virginia and Maryland coasts.

Now, this is of great significance because one of the reasons for this southward shift is the resource has been overfished in the north, and the fish -- and the fleet searching for the resource has gone farther and farther to the south.

Now, here is a resource under stress. One of the functions of these councils will be to remedy this situation if possible, to draw up fishery management plans for the surf clam resource, for example, and if that resource is under stress from such things as petroleum exploration and exploitation it will be that much more difficult for those councils to achieve their objectives.

Q And you feel that was inadequately discussed in the statement?

A Yes.

Q Perhaps we would better turn to the statement and see what is there. I refer your attention beginning at Page 295 of Volume 1 of the Environmental Impact Statement.

A Right.

Q And the following pages. Have you had an opportunity to read those pages?

A Yes.

Q Prior to testifying today?

A Yes.

Q And you are generally familiar with what is contained in those pages?

A Yes.

Q And is it not true that in this section there is a discussion of the various types of fishes to be found in the mid-Atlantic region and various types of shellfish?

A Right.

Q There is also further discussion of their migration patterns including a chart on Page 297 detailing some of the seasonal migration characteristics of some of the more important fish species.

A A table, not a chart.

Q A table.

Is it also true at Pages 300 through 305 there is a discussion and extensive chart concerning the spawning characteristics of the major species in this area?

A Yes, it is very general but it is there.

Q And anyone reading this chart would have some idea of what the major species were and where they would be expected to spawn, at what times of year?

A That's right. In general terms.

Q And similarly, at Pages 307 through 311 there is a chart -- there are two charts actually that refer to the species composition and relative abundance of fish larvae and then species composition and relative abundance of fish larvae from estuarine bays.

A Well, I call these tables and not charts and there is a distinct difference in my mind. I call those charts (indicating).

Q All right, a table.

A Yes.

Q And don't these tables contain information concerning the percentage occurrence of the major species, larvae and --

A Yes, they do show some numbers.

Q Well, is there anything in either of these charts which you think is inaccurate or misleading in any way?

A Yes, there are a lot of errors.

Q Such as?

A Well, for instance, there is a man named Croker. Somebody's put an "a" in here, C-r-o-a-k-e-r. That's on Page 308. Well, on all those pages, as a matter of fact, 308, 309, 310. Several of the scientific names are misspelled. So I kind of wonder about the numbers, too.

Of course, I haven't any means of checking them out because I don't know how they were derived. There are a great many errors in the fishery section of this document which to me seems to point to careless preparation and a lack of adequate editorial review.

And here I have found a few errors, you see, in scientific names, errors in numbers in a few places, and it makes me wonder.

Q Well, let's turn now to the discussio of impacts in Vol. 2, beginning at Page 145 of that volume.

A I don't have a copy of Vol. 2 here. It's missing.

THE COURT: Does anybody have the Court's copy of Vol. 2? I couldn't find itlast night. We were looking for it.

THE WITNESS: I suspect Mr. Hyman may have it, your Honor.

THE COURT: If you should find it --

MR. JENSEN: We can provide another copy of Vol. 2. I don't have the Court's copy.

THE COURT: We will need it for the record should there be any further proceeding.

MR. JENSEN: We will provide an extra copy, your Honor.

THE COURT: Well, have the Clerk mark it when you do that, please.

THE WITNESS: Did you refer to a particular page in this volume?

Q Well, the discussion begins at Page 145. Have you formed an opinion about about the adequacy of the discussion of impacts as far as fish and commercial fish in particular are concerned?

A Yes, the -- the one comment I would have I think is that it's about --

Q A job as could be done with the literature that was examined, and all the way through this document here and elsewhere with respect to fisheries it was necessary to put in qualifications.

I think that was necessary because these descriptive data, this catalog does not in itself allow forecasts to be made as to damage to -- to fish and shellfish resources.

Q Well, would you say that the statements contained in this section give a fair picture of the potential harms that might be experienced by fish and commercial fish as a result of OCS activities?

A They mention potential damage, yes, and obviously, could not have been much more specific based on

the data that were examined. I rather think that even if all of the available data had been examined by this approach -- that is by the -- by the catalog approach -- it probably wouldn't have led to much more precise forecasts, but without -- without examining the literature in great detail myself I don't have much of a feel for how much was missed, you see. I do know some was missed.

Q You feel that these forecasts are not precise enough, is that your testimony, the forecasts contained in the sections?

A The forecasts necessarily have to be very general.

Q And isn't it true that this section specifically states that there could be serious, even disastrous damage to large quantities of --

A That's right.

Q -- commercial fish? And I refer now to the top of Page 146 where it states that -- in a discussion of fish larvae --"that some fish larvae are concentrated in the upper layers of water, the larvae could be exposed to direct kill from water soluble fractions of hydrocarbons but would also be vulnerable to starvation in the event of a massive spill that killed off their vital food supply of phytoplankton and zooplankton," would you say that was a fair statement?

A That's a fair statement. A 513

Q And just below in the paragraph on the possible sublethal effects of oil pollution, where it states, "The sublethal effects of oil pollution, especially from the chronic low-level discharge of oil into the marine environment, are the least known and potentially the most dangerous to fish. Sublethal effects are often subtle and may not be known until damage to the population is widespread."

Would you agree with that statement?

A Yes, I could make that statement myself but I would like to point out that what has been missed here is the -- is the opportunity to talk about the other sources of sublethal damage to the fish.

For example, all of these species undergo wide variations in abundance from natural causes from time to time, over short periods, sometimes over long periods we know almost nothing about what these factors are and how they operate.

You are also operating against a background of heavy fishing removals, which also obviously must have effects onthe stocks. And there is -- there is no -- virtually no discussion of these interactions and the difficulty of measuring the effects of petroleum against

this background, or scientists sometimes call it background noise of natural and other manmade variations.

Q Well, has anyone to your knowledge thus far in the research literature done such a measurement or attempted such a measurement?

That is --

A I am not sure I understand the question.

Q -- specifically a measurement of possible oil spill pollution against these other factors which you delineated, the effect of overfishing on supplies of fish?

Is this an area that's been studied?

A No, I don't think so.

Nevertheless, I think it should have been mentioned.

Q Now, let's turn to the section beginning at Page 184, Vol. 2. It deals with commercial fishing.

A Yes.

Q In that section there is a discussion, is there not, of the way in which the physical structures that might be used in OCS operations would impact upon commercial fishing.

A Yes.

Q And do you have any complaints concerning the adequacy of that discussion?

A I think that's a reasonably good discussion of the subject.

Q Now, turning your attention to Page 188 of the same volume, there is a summary statement of the potential effects on commercial fish catches from oil spills and related pollution from OCS activities and it lists four potential harms that might occur.

Could you review those now briefly?

A Yes. The first one is if large amounts of plankton and other small organisms that act as -- that serve as fish food are destroyed or damaged, and this could have an effect directly on the fisheries.

The second --

Q Would you agree with that conclusion?

A Yes.

Q All right, proceed.

A The second item is that "entire classes of juvenile or larval fish within the contamination area might be destroyed in a given area, and giving -- thereby giving reduced yields in subsequent years."

Q I sthat a reasonable statement of what could occur?

A Yes, it is a -- it's a reasonable statement of something that might happen.

Q Proceed with Number 3.

A Number 3 suggest that oil pollution might reduce the resistance of organisms to desease and other environmental stresses.

Q Is that also a fair statement of what coudl occur?

A Yes, it is -- it's a possibility, of course.

Q And the same for Number 4?

What is --

A Fish -- fish may have to be discardod due to the taining of the flesh. I would have added shellfish there but that's a minor point. Shellfish are much more sensitive than fishes are to oily flavors andso on. But that certainly is a distinct possibility.

Q Are there any others that you feel should be added to that list which were omitted?

A Well, yes, I would add one that I mentioned before and that's the question of additional stresses that might be put on organisms that have already been -- or stocks that have already been damaged from other human actions, that might interfere with the whole management of the fisheries, especially when governments are trying to restore resources that have been overfished.

jb/ss
4am

BY MR. JENSEN:

Q In other words, you would have -- you know, correct me if I am wrong. I want to be clear about this.

But you would have preferred if the statement had contained some discussions of the impact on fish and their location?

A Of an interreaction between all of these things.

Q Of the two that is of potential harm from oil and related pollution or over-fishing, which is the --which poses the greatest threat to the existing supply of fish in the mid-Atlantic?

A I couldn't answer that question because I don't have any data. I think they are most serious threats, but I can't say nothing about the absolute effect of petroleum.

Q Now, I believe you testified concerning a proposal that was submitted by the Virginia Institute of -- is it Marine Scientists?

A Yes.

Q And in the context of that testimony, you said that you felt that VIMS was unhappy about what they were being asked to do.

What is the basis for that statement?

A The statement there -- it is somewhere in the document and I can't identify it as to page. That with respect

to one part of the study they would have liked to do it in a different way, but that the request for proposal did not allow them to do it that way. And I think there was something said about that they would like to try and talk to BLM and perhaps get a modification of that particular aspect of the study.

Q Well, have you ever spoken with anybody at VIMS concerning this proposal?

A No.

Q Have you spoken to anyone at BLM concerning this proposal?

A Only in general terms.

Q So this would be the exclusive source of your knowledge for that statement that VIMS was unhappy?

A Well, the statement is there.

Q What was it that VIMS was referring to when it said it wanted to do it a little differently?

A I don't recollect.

Q Now, I believe that you testified that one of your criticisms of VIMS' proposal is that it's going to be a catalogue or a continuing catalogue entailing conditions in the mid-Atlantic rather than predictive proposal; is that correct?

A Yes. And, I gather, that is because that's what

BLM wants. That's what EP asked for, you see.

Q Well, isn't it true, Doctor, that in order to do thekind of predictive studies which you are talking about in the area of oil and impact on fish, that it's very essential for -- first of all, to establish a baseline of information concerning what the environmental conditions actually are in the mid-Atlantic region?

A Yes. I have no argument to that at all.

Q So you are not saying that what they propose to do is unworthy, but simply something in addition that also should be done?

A And might have higher priority.

Q Could you do the one without the other?

A Well, it's a matter of priority. If it's -- if you have limited resources in terms of funds and manpower, you have to decide what is the most important thing to do first. Usually, you can't do everything that you would like to do. And in this case I think that the most important issue is to have a better understanding of the effects of petroleum on processes, biological processes in the ocean.

Q Well, let's assume that there is a large potential quantity of oil and gas in the mid-Atlantic and that the government is moving as expeditiously as it can possibly do to allow the exploration and development of those resources and

wants to do it within the most abbreviated time frame possible. Of those two types of study that we are talking about, which in that context would be the most critical study to complete before you began the exploration and development.

A Well, I would certainly place priority on the one that isn't being done. Because what is being done is simply going to add to the catalogue.

I don't mean it wouldn't be good scientific work. It will. It will give us more information, give you more of a -- what people call a base line. But it's not going to help you predict what is going to happen.

Q But isn't it true that once production activities began and the pollution and whatever is associated with this activity begins, that the base line is going to be substantially changed?

A Yes. But if it's -- if it is that you are not going to be able to tell why, you are not going to be able to put your finger on the effects of petroleum any more than you can on the natural changes in the environmental conditions, the things that I have mentioned that cause the --

Q Isn't it equally true that you acquire the base line data and you might not be able to recognize the changes in the environmental conditions of the results of the OCS activities?

A Well, I think we are in a position now where we recognize the changes in the fish stock because we are measuring them all the time. So we have a fair fund of knowledge on this subject. These charts demonstrate that. And these charts are by no means all of the available information.

And on the question of the effect of petroleum, the petroleum products on the organisms, we know far less. So that's why I would give it priority.

Q I think you testified that one area of research that you would like to see done involves, I guess, oil ingestion by copepods; is that correct?

A Yes.

Q Have you done any research yourself in this area?

A No. That's not my field of expertise.

Q Do you have any first-hand knowledge of this problem, if it is a problem.

A Well, I have talked to some of my colleagues about it who -- my colleagues who are qualified in this particular field of biology.

Q And your testimony earlier concerning the possible effects of this oil ingestion in the copepods is based on these conditions with your colleagues?

A Basedon certain things I have read in the literature and based on my own judgment as a scientist of fairly long experience on what are the important issues. I don't necessarily have to be able to do research in that particular field to be able to form I think an intelligent judgment as to what should be done and what ought to be done first.

Q So by reviewing the literature and by discussing this with your colleagues, you think that it's possible to form an intelligent judgment about this issue?

A I think so.

Q You similarly testified that you thought it was feasible or maybe even desirable to undertake the control oil spill and to examine biological process in that context.

A I think that would be a very exciting piece of research and might get the kind of answer you want most promptly.

Q Do you in fact know whether such a study is feasible?

A I know that certain people in other laboratories have thought about the same thing.

I discussed this with Dr. Teal the other day when he was here to testify, and he said that he often contemplated doing something like this.

Q And is your knowledge of this similarly based on your conversations with colleagues such as Dr. Teal and your review of existing literature?

A And my general knowledge of oceanography, yes.

Q Now, you also testified that you felt that BLM was not asking the right questions in its base line study? What did you mean by that?

A Well, the answers to the previous questions answer that, too. In other words, the questions aren't maybe so important as to what was there because we know that to a considerable degree. But what happens when you put petroleum or other materials into the national environment, what happens to those organisms. And that has been addressed in this document.

Don't let me mislead you because we have just gone through some of the papers. But it hasn't -- in my opinion, from reading this document rather carefully, it doesn't come out as a -- as a major priority as far as existing knowledge or future knowledge is concerned.

Q Well, I think we could agree that the document doesn't assign any probabilities as to likelihood that these particular environmental impacts might occur? Is that a fair statement?

A Yes, I think that is right. But I think I can

form some judgment from the fact that the kind of things that VIMS has been asked to do are more of the same.

Q This request for proposal -- did you submit a proposal?

A No.

Q Do you know whether the institution with which you are affiliated submitted a proposal?

A No. We don't do that kind of research. We are more interested in processes.

Q Now, you testified that the 40 environmental impact statement was inaccurate in the discussion of catchers of summer flounder and of the recent figures on oyster production?

A Yes.

Q Is that true?

A Yes.

Q And that this inaccuracy tended to minimize the extent to which flounder were being caught and oysters were being produced?

A In general, that describes it. Yes.

Q Is it your feeling that this inaccuracy would mislead the Secretary into believing in some way that the OCS activities were going to have less environmental harm as opposed to more harm?

A Well, as a statement of the present conditions of these resources, it's an untrue statement. You see, it's incorrect.

Q It's incorrect because the resources are more plentiful than it characterized them as being?

A Yes. Let me give you some numbers.

In the State of Maryland in the last approximately 15 years, the production of oysters has more than doubled. I think it's about -- an increase of about two and a half times.

In the State of New York, the oyster industry was at a very low level of production. In 1967 I think something like only about a hundred thousand pounds of meat were produced. Last year it was almost two and a half million pounds. And this has been done by scientific well controlled culture of oysters.

So that a general statement that says that the oyster industry has been declining, describes in general the long term effect, but it is quite misleading with respect to the situation today.

Q But over the long term, has it in fact been declining?

A Over the long term, there's been a downward trend. But that trend has been reversed in the last fifteen

years along the Atlantic coast.

Q Now, one of your other criticisms concerned the inadequacy of the discussion of foreign catch data; is that correct?

A Yes.

Q And you testified that foreign catch data is well documented?

A No, I didn't say that I don't think. What I intended to say was that it's better documented than our domestic catches. It's not -- I wouldn't like to leave the impression that it's totally accurate because I am sure it is not.

Q Isn't it the truth of the matter that foreign catch data is oftentimes wildly inaccurate because of the foreign fishing fleets will exceed their quotas and will violate the restrictions and the regulations which have been placed upon them?

A But if they exceed their quotas, we find it out. And so the statistics are accurate to that extent.

Q We do?

A Yes.

Q In every instance?

A I am sure not in every instance, but in many instances. But, again, I will stick by my statement that they

are -- in general, they are more accurate than our domestic fish statistics. And I can explain why if you would like to know.

Q Well --

THE COURT: Well, I would like to know.

THE WITNESS: Well, your Honor, our fishermen are mostly paid in cash. They don't like paying income taxes.

THE COURT: I see.

THE WITNESS: That's it in a nutshell. And so our commercial fisheries' statistics are usually very much underestimated. And salt water sport fishermen on the other hand are proud of what they caught and so they usually exaggerate.

Q Now, I think one ofyour criticisms of the environmental impact statement was that the person who would have authored certain sections would rely to a great degree on a study that was done by Saila & Pratt of the University of Rhode Island?

A That's my impression because that paper is cited a number of times throughout the fishery section.

Q Are you familiar with these two individuals, Saila and Pratt, who prepared the statement?

A Yes.

Q What is your opinion of their qualifications in this area?

A Well, the paper doesn't measure up to their qualifications. The paper is a very sloppy job. I could give you chapter and verse in great detail. It's careless. It was obviously done in a hurry. It wasn't checked by Saila or Pratt because they are reputed to be good scientists. And I am sure if they read that document they must be very much ashamed of it. I would be.

Q Now, I was confused in your testimony concerning separation of exploration and production. I believe you testified that from your point of view that would be desirable; is that correct?

A Yes. Without evaluating the economic aspects, which I am not competent to judge, it just seems to make sense to me to find out what reserves are there before you decide on an exploitation scheme. It might turn out that the reserves aren't worthwhile exploiting.

Q So this is your general observation about the desirability of knowing whether or not there is oil there before you commit yourself to produce?

A It's based on more than that. In this program decision option document in my hand on the very first page, it says that.

"There is no assurance that petroleum in marketable quantities or any petroleum at all will be found."

Q Marketable.

A Yes. So that on that basis, and just from my - from my rather general thinking about the problem, I conclude that if it were economically feasible, why not. Why link the two? Why not find out what is there first and then make your plans to exploit.

Q I don't understand your concern here. Are you concerned that the oil companies might be throwing away their money and gambling on these leases?

A No. I am concerned that the very fact of exploration, if it did find exploitable reserves, might then automatically lead to exploitation without any further consideration of the environmental consequences.

Now, there may be no reason for that concern. But because I don't consider myself an expert in this field, but I am concerned --

Q Are you familiar with the OCS program as it's now structured? Have you studied that in any way previous to testifying?

A No, not in any great detail. I couldn't qualify as an expert on that.

Q So you are not familiar with the process prior

to development, OCS lessees have to submit development plans to be reviewed by the state and to be reviewed by the Secretary of the Interior.

A Yes, I understand that in general terms. But, you know, you could still come out with a document like this which has also been reviewed by these people.

Q Now, you also testified that there was data at the National Marine Fishery Service which you felt was not used and could have been used in this environmental impact statement?

A Yes.

Q Will you specify what kind of data?

A These, for one example.

Q You are now referring to the list of publications and the charts which you reproduced here?

A Yes. And that's by no means a complete list.

Q What is the rest of it?

A I can't tell you about the rest. The way I got that list was simply consulting my own personal library. And I didn't even do that exhaustively. I was just looking for examples.

Q Well, you testified concerning computerized data?

A I answered some questions about computerized

data, yes.

Q Do you know if such data exists?

A I know that the data exists in published form that were not consulted. Or if they were, they were not mentioned here or not used. I know that data exists which have not been analyzed yet.

That is only natural because there is a time lag from collecting data to analyzing it and publishing it.

Q Well, do you know whether or not all of the data which is acquired by the National Marine Fisher/ Service is ever analyzed?

A I am afraid I've got to make an honest statement of fact. Sometimes it never is.

Q And this data which -- some of this data which you find lacking in the environmental impact statement, is it possible that some of this data is in this unanalyzed form?

A No. I am not referring to that. Because data that have not been analyzed and have not been published, your people couldn't possibly have been expected to get access to those and analyze them in the time scale of your study. No, I am not being that stringent in my criticism.

Q So when you were talking about retrievable computerized analysis, an analysis could be done quickly on this data, it was not your intention to testify that this data

should have been included in the environmental impact statement.

A Well, it was Mr. Like's intent. I don't know what his intent was. I was simply answering questions that Mr. Like was putting to me.

MR. JENSEN: Just one moment.

Q Now, you testified concerning the program decision option document for sale number 40?

A Yes.

Q And you cited an inadequacy in that document at page 13 concerning sport fishery; is that correct?

A I'll have to look at that and see.

Q Yes.

A Now, I looked at Mr. Like's document. I think this -- oh, these pages aren't numbered.

Yes. Here it is.

Q Is there any difference between this document and --

A No. They are the same. They are the same. At least, that paragraph is the same.

Q Would you read the entire paragraph, please.

A It's headed, "Fishing Interests."

"Conflicts with the fishing industry would result primarily from the removal of fishing grounds by

platform placement and bottom obstructions which could damage fishing gear, or oil spills which could reduce the quantity or quality of fish catch. It is estimated that a maximum of 810 to 3,240 acres could be removed from fishing at any time during the exploration phase, leveling off to a maximum of 250 acres during production operations. Because there are no total catch data available for the mid-Atlantic on a specific area basis --"

I don't know what that means. I don't think it's correct.

"-- the impacts on fish populations resulting from oil and gas development are not quantifiable at this time. It is unlikely that sport fishing will be affected at all from activity associated with the proposed sale. Since the majority of all sports fishing takes place near shore, the only enhancement afforded by platforms as artificial reefs will occur to the very small segment of the population which fishes for large game fish at the edge of the Continental Shelf or at submarine canyon heads."

Q I think you testified that you disagreed with the statement that sport fishing would not likely be affected at all?

A Yes. Because this statement ignores one very important thing. And that is that these species migrate, and

that the species that are caught in the sea for sport move in shore, offshore north and south with the seasons, and so they could be affected if there were any -- if there were any accidents out here which could damage the fishery resource. It would affect sport fishing.

Q Doesn't it state in the Environmental Impact Statement that such things could occur?

A In other places, yes. In the Environmental Impact Statement, yes, it does.

Q I ask you to read that again to yourself carefully, because I think if you read that carefully you will observe that that sentence refers to the following sentence which discusses whether or not sport fishing will be enhanced as a result of putting these platforms in the mid-Atlantic Ocean.

A Well, that -- yes. Taking it out of context, it does. But I will remind you that this paragraph begins with the words, "conflict with the fishing industry."

Q But --

A That's the opening.

Q But isn't it true, Doctor, that what that statement in fact refers to is that there is little likelihood that these platforms, because of where they're going to be located so many miles off shore, are going to enhance sport

fishing in the way they have done in other areas such as the Gulf?

A If you're only talking about the platform and nothing else, that is one thing. But I see at the top of the page 12 -- the heading is, "Environmental," and includes multiple use conflicts to me. Well, if you have a platform there, you're going to be producing oil also. And if there is an oil spill that does damage fishery resources, it certainly is going to affect sport fishing.

Q All right. Let's turn to the Environmental Impact Statement, Volume 2, Page 190.

A I've got it.

Q Now, on that page, the discussion beginning, caption, "Sport Fisheries."

A Yes.

Q And right at the outset -- and I quote -- it says:

"There are several possible situations when sport fishing could nevertheless be impacted by OCS gas and oil development."

And then it lists four items. Do you see that?

A Yes.

Q Doesn't the first item refer to the possibility that sport fishing opportunities might be increased as a

result of artificial reefs being created by the platform?

A Yes. I have no quarrel with that conclusion.

Q Aren't the other three -- withdrawn.

Do not the other three questions deal with the possibility that fish population, sport fish populations are going to be diminished possibly drastically by the possible oil spill?

A Yes.

Q Excuse me. There are six altogether. So the other five deal with the diminution or loss of sport fishing activity; is that correct?

A Yes.

Q So that anybody reading this discussion of sport fisheries here in the very first page would see a catalogue, a list of at least five ways in which sport fishing might be seriously damaged or a diminution as a result of the OCS activities that are proposed?

A Yes.

Q Now, I don't want to hold you too closely to what you testified to, Doctor, but I know you said this:

You testified that the information which is presented on these charts that are arrayed around the

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What you testified to was that the information in the EIS, that is, concerning this subject could have been presented in a much more precise way such as you have done on your charts?

A Yes. I was referring -- I was comparing it, then, to that Chart Number 4. I've forgotten the title on it.

Q Well, Doctor, I -- the chart number 4?

A Yes.

Q That contains data for a wide variety of fishes; is that not true?

A Very generalized data, yes.

Q And it contains markings on the charts to indicate where those fish are or where they range?

A Not really. Because it's only done in a few little places on the chart. You see, these charts show variations in numbers for the whole area. That chart to me as a scientist contains virtually no information. No useful information for decision making.

Q Well, I have difficulty understanding how all of these charts can be more precise than this document. I mean if we are talking about precision, wouldn't it be fair to say that this document, whatever your feelings are about the document, are more -- it is a more precise document than these twenty charts that you have?

A No.

MR. BIALIK: Will you note the exhibit number of that.

THE WITNESS: It's part of 34-4.

MR. JENSEN: Visual 4. It's entitled, Vegetation Coastal Zone and Offshore Fisheries, Visual Number 4.

Q I will ask you to review that for a moment.

A I reviewed it in great detail many times. I really can't get much information from it.

Q Doesn't the document contain a list of the major species of fish to be found?

THE COURT: Excuse me. It's clear now. The map is clear enough. I must say I agree with the doctor. I have looked at the chart, and the chart doesn't compare to the kind of information he has on those other charts. I was curious about it because I wanted to see where the fish were that I looked for for many years. And you can't tell anything from your chart. You can tell it from the doctor's.

All right. Let's move on to something else.

(Continued next page.)

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A 545

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Yes. Here it is.

Q Is there any difference between this document and --

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Q Doesn't it state in the Environmental Impact Statement that such things could occur?

A In other places, yes. In the Environmental Impact Statement, yes, it does.

Q I ask you to read that again to yourself carefully, because I think if you read that carefully you will observe that that sentence refers to the following sentence which discusses whether or not sport fishing will be enhanced as a result of putting these platforms in the mid-Atlantic Ocean.

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Q All right. Let's turn to the Environmental Impact Statement, Volume 2, Page 190.

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Q Now, on that page, the discussion beginning, caption, "Sport Fisheries."

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Q And right at the outset -- and I quote -- it says:

"There are several possible situations when sport fishing could nevertheless be impacted by OCS gas and oil development."

And then it lists four items. Do you see that?

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Do not the other three questions deal with the possibility that fish population, sport fish populations are going to be diminished possibly drastically by the possible oil spill?

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Q Excuse me. There are six altogether. So the other five deal with the diminution or loss of sport fishing activity; is that correct?

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Q So that anybody reading this discussion of sport fisheries here in the very first page would see a catalogue, a list of at least five ways in which sport fishing might be seriously damaged or a diminution as a result of the OCS activities that are proposed?

A Yes.

Q Now, I don't want to hold you too closely to what you testified to, Doctor, but I know you said this:

You testified that the information which is presented on these charts that are arrayed around the Courtroom could have been presented in a much more precise way -- excuse me. I withdraw that.

What you testified to was that the information in the EIS, that is, concerning this subject could have been presented in a much more precise way such as you have done on your charts?

A Yes. I was referring -- I was comparing it, then, to that Chart Number 4. I've forgotten the title on it.

Q Well, Doctor, I -- the chart number 4?

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A Very generalized data, yes.

Q And it contains markings on the charts to indicate where those fish are or where they range?

A Not really. Because it's only done in a few little places on the chart. You see, these charts show variations in numbers for the whole area. That chart to me as a scientist contains virtually no information. No useful information for decision making.

Q Well, I have difficulty understanding how all of these charts can be more precise than this document. I mean if we are talking about precision, wouldn't it be fair to say that this document, whatever your feelings are about the document, are more -- it is a more precise document than [illegible] charts that you have?

THE WITNESS: Oh, no, building of the platforms doesn't create a problem in my mind at all.

THE COURT: All right, so the building of the platforms is out as a substantial factor. And I suppose the same thing is really true of the pipelines, even if they run four pipelines to the shore.

THE WITNESS: Well, the pipelines create some different kinds of problems because they have got to go across the wetlands and that --

THE COURT: Yes, but assuming there isn't any great destruction of wetlands.

THE WITNESS: Yes, the -- what damage there is will be reparable.

THE COURT: So what we are talking about is oil spillage and its impact, aren't we?

THE WITNESS: That's really the thing that I worry about, your Honor.

THE COURT: We don't know how much oil spillage there is going to be.

THE WITNESS: No.

THE COURT: We don't know what periods of the year it's going to occur in if it occurs at all.

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THE WITNESS: No.

THE COURT: We don't know what the impact is going to be if it occurs.

THE WITNESS: That's right.

THE COURT: So when we get all finished with the available data, what more could you say than the fact that we don't know?

THE WITNESS: Except that in -- in my mind, your Honor, if we knew more about the effects on the organisms we could make more intelligent judgments as to the decision between -- to extract and not to extract.

THE COURT: Well, I know that's always true, if we had more information we might make more accurate judgments but the Secretary has to make that practical decision based on data now available.

THE WITNESS: Of course.

THE COURT: So it doesn't -- with all due respect, it doesn't seem to me this helps very much. I mean an average intelligent citizen who has some general knowledge, as I suppose the Secretary of Interior should, of this general situation, is not going to be helped very much by

all of this unless he is willing to wait for an indefinite number of years for the effect of this research, which may or may not be useful, and it is going to be very, very difficult to conduct.

How do you conduct the effect of these hydrocarbons in an open sea with drifting organisms and the like?

THE WITNESS: Oh, I haven't really thought very much about that but one way to do it -- and it might be totally impracticable -- would be to put a great big plastic bag out there and spill the oil into that, a big enough one so that it would be a realistic chunk of the ocean, you see.

THE COURT: But even that, the experiment itself prevents currents from going in and out.

THE WITNESS: Yes.

THE COURT: And dispersal and everything else.

THE WITNESS: Or you might just let the thing drift and put it out far enough so that the chances of getting onto shore are -- are minimal.

But your -- it is correct what you say,

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except that all other things being equal, it appeals to me to -- to separate the two parts of the process.

THE COURT: Yes.

THE WITNESS: Because the more information you have when you make your final decision on that second question, the better able to -- the better will the Secretary be able to make a -- a good educated guess.

THE COURT: Possibly that's so. He may be more confused by the additional data, which may be conflicting.

THE WITNESS: Well, that often happens. I tell my students sometimes if you have got two points on the curve you better not get any more points because you can draw a straight line between those two and if you draw another point it's not going to fit the hypothesis.

THE COURT: And for practical decision-making you may be better off with a simple curve.

THE WITNESS: I don't think so because it may lead you to quite erroneous conclusions.

THE COURT: You have been very helpful, thank you very much.

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THE COURT: All right, let's all go to lunch and be back, please, at two-thirty.

(Luncheon recess.)

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AFTERNOON SESSION

2:30 o'clock p.m.

THE CLERK: Resume of StephenMoore marked as Plaintiff's Exhibit 56 for identification.

THE COURT: At the end of today's session I want counsel to indicate to me how long they think these hearings are going to continue. I am not going to cut any of you off. I am going to give you all the time you feel is reasonable and that you need. And that applies to plaintiffs and defendants.

On the other hand, I am, as you understand, scheduled to start a vacation Monday. My entire staff has made plans in accordance with my own plans. I am perfectly willing to forego my vacation, but I have to know what to expect so that I can arrange for temporary assistance while my regular staff is away beginning Monday.

So if you could consult with each other and give me an estimate, I would appreciate it.

All right, proceed.

STEPHEN F. MOORE, called as a witness, being duly sworn by the Clerk of the Court, testified as follows:

(Continued next page.)

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DIRECT EXAMINATION

BY MR. LIKE:

Q Professor Moore, please state your present employment?

A I am currently an Associate Professor in the Department of Civil Engineering at the Massachusetts Institute of Technology in Cambridge, Massachusetts.

Q I show you a five-page document, Plaintiff's Exhibit 56 for identification, and I ask you whether this exhibit accurately sets forth your biographical resume and published papers and technical report?

A Yes, it does.

MR. LIKE: I offer it in evidence.

THE COURT: Admitted.

THE CLERK: So marked.

MR. LIKE: Thank you.

Q Please summarize that portion of your professional history which concerns studies concerning oil or investigation of research concerning oil and the environment?

A Well, during the past five years, although the studies are referred to as actually having taken place, from the period approximately 1972 through 1974 into '75, involve a number of studies for the -- with regard to the potential impacts of petroleum related activities. Specifically, I was

the principal investigator on an analysis of the potential impact of supertanker ports at Machias Bay, Maine.

I was a principal investigator on a study of the potential oil spill impacts and other related activities associated with petroleum development on the Georgia banks in the North Atlantic region.

I was principal investigator on the study carried out for the Council of Environmental Quality with regard to the potential biological oil discharge in the Atlantic region and Gulf of Alaska. And I was a participant in the National Academy of Science Workshop on the input data and effects of petroleum in marine environment.

And finally, I was a principal investigator on the study of the potential biological effect of hypothetical oil discharge on the south shore coastal region of Long Island, New York.

Q Please tell us what aspects of analysis of the aquatic environment you have been primarily concerned with technically and from a standpoint of modeling or systems analysis?

A Well, my interests are somewhat -- I would call [illegible] relatively new hybrid in the area of ecological analysis. It is [illegible] engineering and systems ecology. And I am primarily concerned with the analysis and modeling of

ecological systems for thepurpose of assessing and monitoring environmental impacts. In some regard it's been concerned with physical processes in aquatic environment and is by and large concerned with the ecological aspects of aquatic environment.

Q What is a systems analyst, if you can give it to us briefly from the standpoint of model impacts on the aquatic environment.

A Well, a systems analyst attempts to try to bring together in a coherent and consistent framework all of the elements of a particular problem, the physical, chemical and biological elements of an environmental problem and formulate a synthesis which presents a whole listing of representations of the problem. So it involves trying to grapple with all dimensions of a particular -- all of the dimensions of a particular activity.

Q Does a systems analyst use in any particular aspect of technology assessments that you are aware of besides modeling the aquatic environment?

A Systems analysts are -- there are systems analysts in economics. There are systems analysts in decision making theory. It can be viewed as a very broad blanket approach to any complex problem where the attempt is to try to develop synthesis of complex, uncertain situations into

coherent answers.

Q What would the relation be between a systems analyst and the decision-making concerning the OCS?

A Well, one thought that comes to mind about that is that in a systems analyst approach, it would attempt to bring -- to lay out the alternatives which exist in the particular situation, and would try to lay out as clearly as possible what the potential inimpacts might be. But then would also attempt to address the question of how good or how well known -- I don't like the word good in that context.

How well known or how uncertain are those particular assessments.

In order to make an informed decision, it is necessary to not only have a forecast of what might happen, but also how good that forecast is. And so a systems analyst does provide some methodology, sometimes a framework, a way of looking at the trouble, some approach which tries to get at some of the difficult problems in those complex and uncertain situations.

Q Doctor, from that perspective of a systems analyst concerned with the arctic environment, have you reviewed the final environmental impact statement of lease sale [illegible]?

A Yes. I would like to elaborate because I viewed

it not as a systems analyst, but in particular from the point of view of a systems ecologist. I think that is important. I would like to add that additional element.

Q Tell us, please, how you went about the task of analyzing the final environmental statement for sale 40 and indicate what aspects of that document you reviewed for accuracy, and what your conclusions were and the basis for those conclusions?

A Well, although I have been through the whole document, most of my energy in the review was focused on the problem of biological and ecological impact -- assessment of biological and ecological impacts. And that involved reviewing descriptions of the existing environment, and then assessing the methodology which we used to arrive at conclusions about what the impacts of various proposed activities would be. The approach I took was to try to identify generic characteristics or aspects of the impact statement that may or may not be adequate or inadequate. And as a result of going through that analysis, I was focusing on the question of are there inadequacies. That was the point of view I was taking. I was looking to see if I felt there were inadequacies. And I identified five areas in the context of methodology in environmental impact ecology that I felt was not fully treated and not adequately leading to sufficient

information. And I have just listed these. And then we can deal with them.

Q All right. Will you list the five aspects of the documents which you found inadequate?

A Well, first of all, I was unable to determine what the basis for compiling and synthesizing and evaluating the ecological data base for the impact data base that was inadequately presented, as far as I could determine.

I felt the treatment of uncertainty in the data and the treatment of uncertainty in the resulting analysis was inadequately treated.

(Continued next page.)

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THE COURT: Excuse me. Is that your second point?

THE WITNESS: Second point.

THE COURT: Would you so indicate when you come to a new point?

THE WITNESS: The third point has to do with the methodology used for actually assessing the biological impacts, and I found this to be inadequate.

The fourth point has to do with the inadequacies with regard to the analysis of the movement impacts of near-shore oil spills.

And the last point, the fifth point, has to do with the methodology for summarizing and evaluating the overall risks.

Now, I would like to add to that all of these points in one way or another have to do with the methodology of the impact analysis. So they are in some sense sublets and related to each other. I tried to pick them out in this particular way because it seems like a categorization and useful way to me.

Q Let's start, please, with your first category, and that you testified is an inadequacy in the basis for compiling, synthesizing and evaluating the ecology data for an impact statement.

What did you find--

MR. LIKE: Just one moment.

Q Again, my question is, What did you find inadequate as to the impact statement basis for compiling, synthesizing and evaluating the ecological data base for impact analysis?

A I think it's readily apparent that if we were to gather every piece of data that exists with regard to this mid-Atlantic Region, and offshore region and near-shore region, we would literally have volumes and volumes of information, so that any attempt to try to select out and bring together relevant pieces of data is going to naturally result in some data not particularly addressed and some data being focused on.

And my concern is that if in particular looking, for instance, at Volume I of the impact statement, and the section on Description of Existing Environment, that if I look at the data that is there, there are innumerable questions that come to my mind as to consider a particular piece of data was included, why other pieces of data were excluded, what is the framework for bringing the various pieces of data together.

There simply seems to be what I would call an ad hoc literature review. Certain things are included

for no apparent reason; other things are not.

Then there doesn't seem to be any assessment of the adequacy of the data that is provided.

Now, this gets to my second point. So I will possibly hold off on that for a moment.

Specifically with regard to ecological data, the biological community approach that is presented in the beginnings of a framework, the difficulty is that we are talking about a particular activity. We are talking about offshore development. We are talking about platforms, pipelines, oil spills, and so on. These things bring a focus to the problem and could provide criteria for deciding what data to include and what not to include, what things are relevant to this particular problem in this particular region.

An example that comes to my mind is, for instance, as near as I could determine in the water quality section, which is an important ecological dimension, I was unable to find any reference to the existence or lack thereof of hydro -- ambient hydrocarbons for the Middle Atlantic Region offshore and onshore.

Now, it is clear, if one wants to determine what the potential increases of hydrocarbons consequences might be, there needs to be data presented and provided with regard to what the existing ambient levels are.

Now, if that data doesn't exist, then that is a specific parameter which seems to me appropriate to bring out and say, "This does not exist at this time." I understand that the ongoing environmental baseline study attempts to get at that, but that is neither here nor there.

The point is that in the analysis, the methodology used, this area is not treated.

On the other hand, there is -- rather, I'd say, considerable amount of energy or space in the impact statement provided to the question of nitrates and phosphates concentration in the near and offshore regions.

Now, nitrate and phosphate concentrations are potentially important water quality variables that govern particularly plankton growth.

The question here is why include those nitrate and phosphate concentrations in this particular study about oil impacts?

Yes, phosphate and nitrate help describe the existing environment, but there is no clear indication of why this piece of data and not others. That's just an example of that particular kind of situation.

Q Does the final environmental impact statement contain an explicit framework for making the type of impact assessment that you believe ought to be made?

A In regard to-- I am not sure about-- What do you mean by "framework"? Overall framework or in terms of this -- a particular area of what data shall we include or not include, and then identify what data we don't have and need to get.

Q In terms of the latter.

A Nothing explicit. And I infer from reading the document that it -- that it's a general literature review, an exercist of what data seems to exist without any clear establishment of a framework. I don't find a framework other than an ad hoc literature review. That could be a framework.

Q Is the approach that is used in the final environmental impact statement sufficient for deciding a question such as what environmental variables are essential for predicting oil spill impacts?

A Could you ask that again?

Q Yes. I am asking wnether or not the approach, the biological community approach which is used, whether it in and of itself is sufficient for deciding the question like what environmental variables are essential for predicting oil spill impacts.

A Well, not in and of itself. It would be a part of an overall framework, but it is necessary again to

look at the question of, if we are going to talk specifically about the oil spill aspect of it, which, in my mind, is a key issue, what are the characteristics of petroleum substances and their interreactions with the environment, and what elements to focus on biologically as a result.

The biological community approach can provide a way to, if you will, model the existing environment to represent the existing environment. We can think about the plankton and plenthos as a community and so on. But we have to go quite a way beyond that to provide a fully systematic framework for the problem of impact.

Q Well, I am interested in knowing what types of questions cannot be decided by simply using a biological community approach.

A Well--

Q For example, does there have to be some level of spatial or temporal resolution?

A Okay. Well, the question there is, we can define biological community plankton, but then the question is, do we need to understand the plankton at the level of scale, spatial scale of kilometers, 10's of kilometers, 100's of kilometers, and so on?

Temporarily is seasonal variation sufficient? Is variation on the order of decades? Is variation on

the order of 24 hours enough?

These kinds of questions which would help decide what level of data is needed and what data is needed, and then is it available or not? There's no mention of that kind of framework.

Another point that comes to mind is the question of life histories of the particular organisms that one would find in these various communities. What life history parameters do we need to consider to attempt to get at the question of what are the biological effects and what are the effects of an oil spill on a particular population or on a community?

If we look at biological and ecological systems, we can view the problem as having several levels of organization. Subcellular, or cell population communities. Each level being related to the level before it, and the level above it, in that hierarchy. And we can ask questions, biological questions. We can pose questions at each level in terms of what is important biologically at that level in order to assess the problem of oil spills.

And biologically, I don't find any systematic bringing together of that kind of question in the presentation of the impact analysis in that kind of framework. The result being that when a particular piece of data is pre-

sented it is not clear that it has any relevance to this problem and there is no way other than the reader to look at it, and if one has enough background, these questions may occur.

If a person doesn't have the background, then simply takes it as these must be the important data. They are the ones that are presented.

Q Are you saying, then, that the document lacks sufficient criteria for determining what data should be included and what data should be excluded?

A Yes, I think I would agree with that statement.

Q You identified-- Is that all that you want to comment on with respect to the lack of an explicit framework, your first category of adequacy?

A I think it covers-- Let me look at my notes for a minute and see if there is anything that comes to mind. I think that sufficiently covers that issue.

Q On the second area of inadequacy, which you identified as lying in the area of treatment of data and analysis uncertainties, what is the basis for your opinion as to inadequacies in that category?

A Well, the statement has numerous remarks in it. We could identify them specifically, but I think they

have been alluded to in previous testimony. That is, about gaps that exist in the data, incompleteness and so on, and this has also been testified to and is going to always exist. We are never going to have every last piece of data. The problem--

The concern that I have is that uncertainty is in and of itself an essential piece of information for an informed decision-maker. It is not just to say, "This data doesn't exist," but to say, "This data doesn't exist, and if we go" -- if we proceed ahead without this information, here are the risks that are involved from an environmental point of view:

Now, again I would never ask of a document or the preparer of a document that they quantify and lay out a very involved decision analysis of uncertainty. There are frameworks, though, to begin with in that area which begin to get at this problem.

I might-- Well, maybe a useful way to break this down is to look at the question of uncertainties in the data itself.

THE COURT: I am sorry; go ahead.

THE WITNESS: I think a useful way to look at this is to talk about the-- to break down the question of uncertainty into the question of the

question of chronic sublethal effects or effects associated with potential effects associated with chronic lethal discharge of petroleum.

Now, in numerous places in -- I think mostly in Volume II of the impact statement, there are clear indications made that this problem exists, clearly identified as a potential problem. And the fact that we don't know very much about it is also made clear.

What I feel is incomplete about the analysis is that there is no attempt to go beyond that point and inform potential decisionmakers using this document what the risk is of going ahead and making a decision to proceed with this action when there is this major critical area which is simply unknown, and it is not entirely unknown. We know that there are potential carcinogenic provisions, for example. Okay.

We can lay out, I think more clearly than is done in this analysis what they implication of proceeding under this high level of uncertanties are. So that's one area.

Another kind of problem -- there's a different kind of problem than that one, but it relates to uncertainty -- is statements. This one I'll be very

specific about, has to do with the question of World War II tankers' accidents, and in Volume II, page 615 -- I'd better make sure I've got that right. Yes. On page 615 of Volume I with regard to impact of oil spills that may have occurred following accidents during World War II, the first full sentence on that page says,

"There have been no efforts to determine the long-term effects of these spills," which, to my knowledge, is an accurate statement.

However, in Volume II -- and I am stuck again because I don't have Volume II, I've got two of Volume III here -- I believe on page 127 in Volume II -- in the first full paragraph on page 127 of Volume II, the statement is made,

"Continuous oil spills occurred in the Mid-Atlantic Region during World War II. No irreversible or permanent damage to the planktonic community has been reported."

Now, in light of the fact that no attempt has ever been made to look for long-term effects, it is not surprising that there haven't been any reported, and this is, again, what I put under the heading of uncertainty. There is no information

about long-term effects, and yet there is an attempt to draw what I believe is a more certain conclusion than is possible from the data.

So this is an example of carrying data that is provided to a conclusion that I wouldn't agree with.

I am certain-- Well, the fact that there have been -- there's been no damage reported, I agree with. That's an accurate statement, but what I am concerned with is that the impression has been that it's been looked for, and it hasn't been looked for.

Another example -- and this is one I think is more critical than the other, which is probably a minor one, but is a concrete one, if I can get my hands on it -- has to do with conclusions which are drawn with regard to impacts.

And again in Volume II, on page 122 -- let's see, beginning about the third way down the page, in the middle of that paragraph. This is with regard to the effects of oil on plankton, but it is specifically concerned with possible effects on fish and ethnic population, and I will quote from the document.

"Damage to the year class strength of certain species of fish could occur as well as with population of ventric organisms. However, a massive spill

Q Well, you are saying, if I understand you correctly, you are giving an example of what you consider to be the inadequate treatment of uncertainty in the final environmental statement.

What other important examples are you aware of? Not minor matters, but are there any examples that you regard as critical to the process of impact assessment where the treatment of uncertainty has been inadequate?

A Well, I hesitate to qualify this, that I am-- Let me think about the statement I was about to make.

My impression from reading the document -- and I may be generalizing too much, so I am a little hesitant about this, but I can find it in -- I am sure in quite a few examples.

Virtually in all the areas drawing conclusions about effects, there is nothing included in those conclusive statements about how much will be certainty. Some measure of uncertainty, be it qualitative or quantitative. The document certainly has statements about the fact that we have incomplete data and data gaps and lack of information and so on. But it is not carried through to the final analysis.

What is carried through to the final analysis are qualitative conclusions which tend not to be substan-

tiated and documented.

So there is no way of knowing how accurate they are. So that what I am trying to get at -- and we -- if you want to take -- if you want me to do this, I am quite willing to look at each of those conclusion sections on the biological effects on biological communities and assess each one individually.

Q Well, I would like, if you can, to give us a few concrete examples that illustrate your thesis without going section by section through the document.

A Well, another-- Let me see. I am looking in Volume II. I think the statement I just read came from-- What did I say? page 122.

I will just proceed on from that point.

On page 124, at the bottom of the page there, drawing a conclusion regarding the impact of this proposal on the vital plankton of the mid-Atlantic, the first sentence says:

"The studies mentioned previously indicate that the planktonic populations of the mid-Atlantic area will be able to withstand the impacts of a major oil spill and recover fairly rapidly."

Now, again, here's the question of "fairly rapidly." It may be that that is the only -- that's the finest degree of detail and specificity that can be

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for assessing biological impacts of oil spills.

A Right. I didn't get a specific question. I can just proceed to -- to describe my concern--

Q Yes, give us the basis for your conclusions that the methodology for ~~assessing~~ biological impacts of oil spills is inadequate?

A Well, I have articulated some of this already.

As I review this document I have not -- well, let me back up for a moment:

What I -- what I think is important in assessing the impacts of oil spills, some of the key factors in this problem are what is the probability of a spill occurring, where is that spill located, where has the spill moved to, what's the physical and chemical fate of oil in the environment and then what are the biological responses to that substance, and the biological problem -- there is two subsets to that one, there is the question of what are the initial impacts, how much mortality takes place, what percentage of organisms in the affected areas are killed, and then what's the recovery process look like, recovery both in terms of chemic -- the removal of the chemical substance from the environment and then subsequent to that recovery biologically, the return of the population to a -- what I will in quotations call a

dynamic equilibrium return to the state in which the environment existed prior to the spill.

Now, in one way or another each of those elements of the problem are -- are addressed in the impact statement, so it's not that those basic categories are not dealt with.

And I particularly want -- my concern is that when we look at the biological assessment itself -- it -- there is no framework layed out that I can find.

What I -- the framwork in quotation marks that I -- that I find there is what I call an ad hoc -- there is a literature review and then an ad hoc suggestion of general areas of -- of possible biological impact.

There is a lack of specificity and a lack of quantitification where the methods exist and are reported in the literature for being more detailed, more quantitive.

And the problem simply isn't -- there does not seem to be an attempt to push through this problem further to create a more systematic framework for bringing all the pieces together and synthesizing the problem.

The biological communities are discussed and some of the literature with regard to dl spills and the and the effects of oil on -- on organisms is discussed, but it's -- it's never -- there is really no guidance on --

beyond identifying what some of the general problems are. There is no analysis of -- for -- of what would be the measurable or quantified impacts, there is really -- there is relatively little interpretation.

(Continued on the next page.)

in the corridor when he indicated he has approximately a week's worth of testimony on what I would refer to anyway as policy issues and anti-competitive issues that we intend to make argument on the relevancy of those issues.

If the Court should agree with that argument the time frame would come down.

THE COURT: I understand.

Proceed.

MR. LIKE: What I would refer to as NEPA issues.

THE COURT: All right, thank you.

BY MR. LIKE:

Q I take it, Professor Moore, that you are testifying, are you not, that the final environmental statement does not contain an analysis of hypothetical near-shore spillage trajectories such as we have done for offshore spills; correct?

A That's correct.

Q Could you, referring to the exhibits that are in evidence, namely the ones showing the distribution of various fisheries, indicate how the data depicted on the charts could be used in doing a hypothetical near-shore spill scenario?

able to refine that.

Are there any unusual or special resource areas such as the kind of thing that we have mapped for the south coast of Long Island? For instance bird habitats. There are particular areas where certain species -- they use for -- particularly for breeding and nesting; are these in areas that are likely to be impacted along these coastal regions.

It would be possible to get a clearer handle on that if these kinds of resources weremapped and then these kind of overlays of spill probabilities and spill trajectories were made.

(continued next page.)

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Well, I think that -- that particular example, all of those kinds -- those are -- those questions I raised with respect to this particular conclusion I don't find answered in thisconclusion and I think could be answered with a more adequate methodology, and would provide a decision maker with clearer information as to what the nature of near-shore spill impacts might be.

And I think that pretty much addresses that issue as far as I am concerned.

Q O.K. Now, I believe your last category of inadequacy concerned the methodology for summarization and evaluation of overall risks. What is the basis for your opinion that that methodology was inadequate?

A Well, my concern here is that when I -- when I read -- this is Section III-E and -- III-E, III-F and III-G in the impact statement, and it consists of what is -- of a proximity evaluation, a proximity analysis and then a summary risk analysis.

Now, according to the document -- and I'll read it from this -- the proximity evaluation begins on page 353, and it states under "Purpose", fits purpose" -- it referring to the proximity evaluation -- "is to provide the decision maker with an environmental analysis of each tract regarding

possible risks which relate to them."

And then -- so that -- that's the intended purpose of the analysis.

Then the analysis selects oil spills and structures as the two measure categories of impact-producing factors. However if then only looks at the question of off shore oil spills and looks at the question of off shore oil spills in terms of a proximity scale which is a function of the distance of the tract to certain categories of so-called resource factors.

So that what the proximity evaluation is is a scaling, a creation of a scaling -- the proximity evaluation in terms of oil spills is a scaling which is simply the distance from the tract itself to these important resource factors.

Now, in my mind if this -- if this analysis purports to lay out to a decision maker the possible risks associated with each tract, to omit an analysis of near shore spills in the section on oil spills simply makes it incomplete in a very critical area, and the analysis in the end -- the outcome of the analysis can't possibly reflect the possible risks which relate to each tract.

And aside from questions that I -- that I have about the proximity scale itself and the choice of resource factors, there is no point in even going into those because

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by omitting the near shore spills from the analysis -- it simply leaves out a key potential risk area.

Now, in my mind the problem is compounded because the proximity evaluation is then used to carry out a summary risk analysis, and this begins on page 370.

Now, according to Section III-G, the summary risk analysis among other things is -- is -- and I'll quote here -- "This section will attempt to analyze all the tracts which are proposed for leasing according to their relative potential degree of hazard to the environment."

Now again, this kind of -- potentially that's an important element to provide for the decision maker. The problem is that when I get down to the actual analysis of relatively high hazard potential -- excuse me, of relative potential degree of hazard to the environment, what is actually done is that all tracts which have an oil spill proximity value of .8 or greater for a limited set of the resource factors which had been identified, it's assigned a relatively high hazard potential.

WEll, the -- the conclusion which is drawn in this section on page 371 is the following: "None of the 154 tracts are considered to have a relatively high hazard potential."

Well, given the omissions from the analysis, that

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near shore spills are not included, that fisheries are not included, that subtitle Benthic communities are not included, and that chronic low level discharges are not included, that conclusion that none of the tracts have a relatively high hazard potential is -- is probably appropriate.

What -- what's happened here and what concerns me is that if it's -- if it's a summary risk analysis and is really going to try to give you the relative potential degree of hazard for all of the tracts -- and the implication is that it brings the various pieces together, but in fact omits key pieces -- then the conclusion that's drawn, which might be helpful -- it may well be the kind of section that a decision maker would turn to to get a summary, overall analysis of the whole thing, it's got key features missing, and I simply see no useful purpose served by this risk analysis.

It doesn't get at anything.

Q Did you find in the final environmental statement any stardards or criteria established by the BLM for determining the environmental acceptability of leasing and development of OCS areas?

A No, I didn't, and that was a problem which I was -- I'm quite concerned about because one of the goals

for the agency is to carry out an environment -- to make environmentally acceptable decisions. The question is what is environmentally acceptable, what are the -- if we can't establish numerical, quantitative standards, at least criteria could be laid out for what is themeasure of acceptability that's going to be used in deciding.

Without any such measures of acceptability it seems to me the decision maker is going to be left up in the air as to how to evaluate and assess such impacts.

Q Do you have any comments with respect to the base line studies, so-called, and as to how they are designed and their basis --

A Well, I haven't had an opportunity to review the PFP and the proposal and so on. I have looked through the actual contract describing a study, and -- so I'm not prepared to comment in any degree but I would certainly have some concerns, because as outlined in the impact statement the environmental studies that are beingcarried out don't -- especially the ecological parts of it -- it's not clear what hypotheses are being tested, what sorts of variabilities are being assessed, whether impacts are really going to be able to be measured from these studies.

There is a lack of connection between this data collection program and the specific problem that's trying to

be addressed here, so I don't have -- I haven't reviewed this and done enough analysis to be very concrete and detailed about my -- but it's -- a question that I have is had these environmental base line studies been designed with the specific question of impacts from offshore oil drilling and associative activities in mind, and it's not clear to me that it has been.

Q In your opinion, is the final environmental statement for lease sale 40 adequate for the purpose of determining the environmental acceptability of the proposed leasing development?

A No, it is not in my mind, and I -- as I read and review this document I do not believe that a decision maker will have available the best information available and an assessment of how well known the estimated impacts are, and as a result I just don't think it provides the best available information to a decision maker.

MR. LIKE: Doctor Moore is available for cross.

CROSS-EXAMINATION

BY MR. JENSEN:

Q Professor Moore, I believe you testified that you had done some work in connection with the CEQ study on oil and gas with respect to the continental shelf areas?

A There are -- Yes, there are innumerable references to "We don't have this piece of information."

Q "We don't have the data"?

A Yes.

Q And what you are saying now, I take it, is that those references should in some way be collated and quantified so that a decisionmaker could get a collective picture of the absence of data?

A Well, it's a part of what I'm saying, but that's not the key -- that's not really the focal point of my concern.

The focal point of my concern is why this data and not some other data? We know there is other data available, and there has been testimony to the fact that some readily available data wasn't there.

Why was that data left out in the data that was presented here? That's really the focal point of the question that I'm raising.

Q Well--

A And just to add to that, the kind of framework I laid out establishes some kind of criteria and some kind of a way of saying, "Here is why we have this piece of data; here is why we didn't look for this piece of data."

Q And I take it you feel that the document

would be, oh, scientifically more defensible if there were this methodology to justify the various assumptions and the various conclusions arrived at in the document?

A I think that it would be scientifically more justifiable, and I think that it would provide the decision-maker with a considerably improved document.

(Continued on the next page.)

JD fols

Q You say that methods do exist for doing this. Can you be more specific?

A Well, there are a -- a variety of environmental impact assessment methodologies and environmental impact statement methodologies that have been published in the literature that are very, very general, matrix analysis and this type of thing. But I think in this particular problem that I'm most familiar with is the work, the methodology that evolved from our various studies of oil spills, and I want to be very clear, I'm not saying that BLM should have used our methodology. That's the last thing I have in mind.

It's only one, it's one that emerged from our studies, it's subject to criticism, has been criticized. There are people who don't agree with some of the things that we have done, and so I'm not saying they should have done it our way.

What I am saying is we have done what I think is a -- developed a methodology for analyzing oil spills which meet some of the criticisms that I'm making about this impact statement.

Two particular areas that we tried to address ourselves to were this question of recovery, how long does it take for a habitat, for a community to recover from the impacts of -- of a biological -- of an oil spill? And as

uncertain as those estimates are, we have attaced specific lengths of time in terms of years to what we think are the minimum times to recover from a spill. And some of the literature we have used I have already cited, that appeared here, but then was never carried through. Those estimates of recovery are in the literature. They appear in the reports that have been referenced in this document, but they are never mentioned as -- for batter or for worse -- either that BLM just didn't think that it was -- the analysis was adequate, and therefore didn't use it. It's just ignored.

So I don't know whether they felt that it was information and methodology that was inappropriate and -- and not applicable, or whether they didn't know about it, or -- I can't say.

My point is that those estimates, quantitative estimates, exist in the literature and are not -- not discussed one way or the other.

Another element of this problem, another way to quantify the -- or try to quantify what the impacts might be as the extent of the damage in a spacial sense. One of the things that's done in the analysis for offshore spills is to take phypthetical spill scenarios and then track where the stpills might go a d then see where -- what regions of the coastline might be impacted.

This is not carried over into -- to near-shore spills, but what might have been done is to do that with near-shore spills and try to get a measure of whether when a spill impacts a coastline whether it's between the range of one mile and 10 miles, or is it between the range of 100 miles and 1,000 miles.

I think in the programatic statement it's pointed out that the Santa Barbara oil spill impacted something on the order of 1,000 square miles, and I don't -- I hadn't seen that figure before, but I think I could find it in the programatic statement.

O.K., there is an estimate for a particular spill under certainconditions. Whether or not that's useful in this case is not -- I'm not prepared to say.

I do believe it's possible that estimates are made of the spacial extent, at least the bounds in our knowledge of the spacial extent, of particular spills.

Now, what that means, though, is that the analysis has to postulate hypothetical scenarios.

The only way -- to make a generic kind of analysis specific that I know of when -- whenwe don't really have knowledge about what particular spill will occur, and so on, is topostulate some examples that represent the range of events that we might expect. And so one could postulate

hypothetical spills, track, make calculations, uncertain as they may be, but then say how uncertain they are, where those -- where that oil might go, and then make estimates on the bounds of our knowledge about how much say coast -- how many miles of coastline would be impacted.

Now that's -- that's the kind of analysis and the kind of methodology which we have -- which wehad tried to develop.

Q When you referred to a near-shore spill, what causal factor are you attributing to that, a near-shore spill caused by what?

A In this particular case I was thinking predominately of a spill that would occur because of a pipe line break, although I take it that it's not clear that pipe lines will be the way toget oil to the shore, so tankers could be involved, which makes that problem much more critical.

But this gets in -- and I think it's appropriate to -- to go on and get into the fourth point of concern that I expressed, which has to do with the analysis of near-shore oil spills.

Q All right, would you then get into that?

A And the -- theimpact statement is -- is accurate in -- in pointing out the potential severity and the

importance of near-shore spills, but then I get the sense it minimizes or somewhat minimizes this problem on the grounds that the probability of such a spill is very low.

And yet in the statistics on spills -- and I think this is volume 2 -- well, first of all, to be specific about this, in Volume 2 -- gee, I don't have it -- page 115 I think, if my notes are accurate -- yes, the very last sentence on page 115, it says that "the probability of spills from pipe line breaks is given in section III-A-2" -- that's Roman numeral III-A-2 -- "and would be small for the area."

But then when I looked at the statistics for spills, near pipe line spills -- that's on page 89 if my notes are accurate -- yes, page 89, table III-22 -- there is an estimate here of the spill frequency statistics by potential source of spill over the 25-year life of area. And it says here that for pipe lines the estimate of probability of at least one spill occurrence is .92.

Well, that in my mind is not a low probability event.

Now, the pipe line, granted, will be running from the center of the offshore tract 60 or 70 miles off shore to the shoreline, and a spill conceivably could occur anywhere along that line, but the probability of a pipe line

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spill almost is very high, it's more than .9 and the expected number of those to occur is -- is actually 2 and a half in this 25-year life. And if we are trying to take a look at what the worse conditions are, the worst impacts might be, which I think a decision maker needs to have some assessment of, then we can hypthesize that this kind of a spill is likely to -- the probability of this kind of a spill from a pipe line near shore in my mind is not low, it's not small, as stated in the -- as I quoted in the impact statement, but I think it's -- it's -- it's fairly high.

As to it occurring at any particular point, yes, that's ultimately -- mathematically it's a probability of virtually zero, of occurring at a particular point. That to me is not the issue.

The point is that it's likely that this kind of event will occur, so one way to get at the analysis then is to propose a range of hypothetical scarios which represent thekind of event we are talking about.

And by taking this approach to the analysis it's possible to be much more specific, and even become somewhat quantitative about the range of effects that we might expect to occur from this kind of event.

So that rather than getting the rather qualitative kinds of conclusions which are -- which are presented in the

impact statement about near-shore spills, it seems quite reasonable to me -- and the methodology exists in the literature, and I would suspect one could easily conceive of alternative methodologies which would allow this very critical problem of near-shore spills to be treated much more specifically, with much more detail and with some quantification, so we'd get a range on the bounds of our knowledge.

If a near-shore spill occurs, what is the range of miles of coastline that might be impacted? What are the habitats that are going to be impacted? What's the -- what is an estimate for the chemical recovery of these habitats? What's the estimate for the biological recovery?

And quantitatively, with ranges, not a single number but the range that we would have. These methodologies exist and are in the literature, and -- and I don't believe I represented by this -- the work that goes into this document.

I can -- if you'd like we can take specific passages with regard to near-shore spill impacts and -- and I can highlight some aspects of that. If you'd like.

Q Yes, please.

THE COURT: Well, why don't we take a break for just a few minutes, and in the interim perhaps

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Moore-cross/Jensen

Q Now, in this connection, I also think you testified that one of your criticisms of the document was that it failed to lay out criteria or standards for what is acceptable in environmental risks.

A Right. I briefly mentioned that and I agree with that, yes. That's a-- I have a concern about the fact that whereas on one hand environmental acceptability is one of the issues at hand and is raised in the impact statement, there is no apparent, nothing that I could find which says, "Here are the criteria we will use to assess what is acceptable."

Q How does one accept criteria in an environmental impact acceptability?

A Well, we could go on two days about that.

Q Does it involve, among other things the weighing of the particular objects in mind -- and in this case OCS activities -- against the potential harm?

Wouldn't that be part of the process?

A Can you repeat that?

Q I guess what I am getting at is this: Would it be possible to meaningfully calculate acceptable environmental hazard criteria without taking into that calculation the other social interests that may be represented by the action that is being proposed?

A Well, somehow the question as you pose it, I can't go anywhere with it.

Q All right. Can we hypothesize that it can be predicted with some probable figure that a particular species of fish would be decimated?

And there is a probability figure for that likelihood that the decimation occurring.

Now, your testimony is you would like to see some criteria as to when that becomes an eventual unacceptable risk, that decimation of that species of fish?

A If we could calculate the probability that a particular species would be impacted to a certain specified level, then it would seem -- and I emphasize that if we could do that -- okay? -- I am clear that we can try to do it, and that could become one of the -- we could set criteria about probability that -- you know, that would be a way to do it.

If we start setting numbers, we are talking about setting standards. Okay. The criteria might be some major degree of impact on fish population. Okay.

Another criteria might be some major -- the number of miles of coastline that might be affected.

Q No. I--

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A Another major might be the length of the volume of material that has to be dredged up in order to lay the pipeline.

Q I understand all of that. And I think that the EIS attempted to do, although not as specific as you would like --

MR. LIKE: Is that a question or a statement?

MR. JENSEN: I am coming to my question.

Q But I would like-- But I thought you were talking about something quite novel, which is not in the EIS -- which is an expression of the standards of minimal acceptable descretion or harm. If I am wrong about my impression, say so.

A No.

Q I want to understand--

A I am trying to-- The way you put that, I would say, well, that is a goal to shoot for. Okay. I'm not sure we will get to something as concrete and specific as you seem to have in mind, but I certainly think it's something to work toward. Okay. I don't know how else to.

Let me go back to what my concern is. My concern is that I don't find in the document any -- in any

presented coherent form what are the criteria for determining acceptability. It simply says we want an environmental-- the decisions are to be environmentally acceptable. And then there is an analysis.

And then it's never raised again as to what-- out of our analysis is the criteria, nor determining environmental acceptability. I don't know any other way to say it.

Q In your view, this should be a function of the environmental impact statement?

A Yes, it's a decision document.

Q Now, in several places in your direct testimony you refer to phrases in the EIS which you felt perhaps too general to be meaningful. And I -- one specific instance was when you refer to a sentence that said, in effect, that recovery will occur -- I believe I am quoting -- fairly rapidly.

A Right.

Q And you criticized that terminology I believe because you felt that that does not give the decisionmaker specific -- enough information to base his decision.

A Right.

Q But is it not true in the context of that discussion -- and I think you pointed this out yourself --

14 A 602 Fruedenthal - direct

1967 and then in the footnote it says 1976 so I telephone Tony and asked him if there had been any update to this article, of which I was unaware and he said no.

So this is very misleading because one believes that perhaps this is an update.

Q Excuse me.

MR. PICCIANO: Your Honor, just for the record my particular volume does also indicate the reference as a 1976 reference.

THE COURT: It's probably a typographical error.

THE WITNESS: Probably but at the same time it was a little bit misleading and shocking.

At any rate, I then asked Mr. Tormina if these prices were still valid and he said absolutely not, and we multiplied everything by a value of approximately three, and I think if BLM felt that this was important enough data to be put in -- and it was put in,by the way, new from the draft on the request of the commentators -- I think that whoever wrote would have or should have also revealed that in 1967 with the inflation that we have, the values were a little outdated. It's very misleading it's inaccurate and a phone call to Mr. Tormina

plankton, the introduction, most of it has been taken from the trigom, which is the research institute of the Gulf of Maine. A series of books that were published in 1974. And this has all been taken from the phytoplankton section.

In Trigom, the introduction to the phytoplankton section indicates that the writer made a summary of the phytoplankton text that was published the previous year, 1973, in the series by the University of Rhode Island, which was funded by the American Petroleum Institute, and included groups of selected studies. So that by the time we received this -- essentially, 1973 is the latest date that has been included. And we are receiving it third- or fourth-hand.

Q You say 1973 is the latest date that the last reference with respect to Trigom and the University of Rhode Island had its land studies?

A That's correct. Because the articles -- the information in the articles comes to us from the original article which has been abstracted by the University of Rhode Island, all of the citations that say Smayda. Smayda was in charge of putting together the phytoplankton sections for the University of Rhode Island series. So in every case where we see Smayda, 1973, that is really the University of Rhode Island.

So the issues have come down to us from the

original researcher through the University of Rhode Island. And then it has been further condensed by the writers of Trigom. And then we have gotten it fourth-hand.

Q All right. Now, with respect to these sections, biological communities, how much of it refers directly to Trigom and the University of Rhode Island studies?

A You mean --

Q Approximately what --

A Oh. Well, no. What threw me there was you said, their studies. They weren't really studies. Those writers did not -- they abstracted other studies.

Q Thank you.

Would you describe briefly for the Court what the -- what the Trigom study was, what its purpose was in the University of Rhode Island studies as well as its purpose?

A Well, both of them were inventories. The Trigom specifically states that their purpose -- by the way, Trigom had been funded by BLM -- to put together the studies.

Trigom states that its specific purpose was to create an environmental inventory. It does just that. And it's a very useful addition to one's library.

And the University of Rhode Island put together their research accumulation to show the work that had been done to that point and to put up the gap in research that

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needed work.

Neither of those purposes served the purpose of this document, which was not to only report like a laundry list or a grocery list of items, but to explain the inter-relationships of those particular organisms, one to the other. That's what the environment, that's what ecology, and that is what an environmental description is about.

If one had been told to put down a description or an itemized list of organisms, this would be fine. But as I understand an environmental assessment, the environment includes the entire ecology of the interrelationship of the organisms with their environment. The give and take between the organisms and the environment, the environment and the organisms. And we never get that far. We are only brought to the brink of knowing what's there. But the magic of the ecology, the magic of what makes this whole environment out there so fascinating, so important, so useful, so necessary to preserve, we are never really given the full story. We are just tickled.

Q How would you describe your assessment of the discussion, if any, of these interrelationships and cumulative ecosystems effects?

A They are just not there. They are -- they are missing.

There are two ways that cumulative results could have been presented. Many of the commentators on the draft mention that there were no cumulative effects mentioned. And so in this issue there is one section -- I don't know where it is -- but the only cumulative items that are mentioned is the cumulative effect of this sale in conjunction with a succeeding sale in that sense. And the scientific community was not looking for that sort of cumulative effects. The cumulative effects that the scientific community was looking for would have been the cumulative effects on the specific organisms of a series of sub-lethal impacts.

For instance, the increased turbidity, which is mentioned in here, the decreased oxygen, which is increased, the chronic -- the chronic hydrocarbons, which is mentioned, the heavy metals, which are mentioned -- those sort of cumulative impacts, sub-lethally hitting an organism in a consecutive period of time.

Q Well, if these items are mentioned, what is it about the discussion that bothers you?

A The fact that they are never tied together.

Q Can you give me an example of how that should have been done?

A Well --

Q Or could have been done?

A 607

to page 240, the third paragraph.

"The phytoplankton community of the area is very diverse."

To the uninitiated, one doesn't know whether the phytoplankton community of the area being very diverse is good or bad. It happens to be good, as I mentioned yesterday, in the ecology concept where we assume that diversity -- the greater the diversity the healthier a body of water is. Just a generalization. But it normally holds true. But to someone who doesn't know that, who doesn't understand it, that sentence could mean anything.

All right. Then we continue.

"Among the groups" --

Q What would you have added to the end of that sentence if you had written this document?

MR. HYMAN: Your Honor, if there is an objection to the document -- she didn't write the document. She is talking about --

MR. PICCIANO: I have asked if she did.

MR. HYMAN: She's talking about writing a scientific document. She testified that a scientist would not be satisfied with it. She considers it a scientific document. This document was written for non-scientific purposes. A million editors or authors

would write it in a different way. And I don't think how this could be helpful to the Court to make a decision.

THE COURT: Overruled.

I will hear your explanation.

THE WITNESS: I can appreciate --

THE COURT: Excuse me. Don't respond to counsel. Just confine your answer.

THE WITNESS: All right.

Well, as a scientist, when I write for my reports for the Health Department, I am writing for engineers. And they also do not appreciate a strictly scientific reference. They also are making decisions. And when I write a scientific statement, I must elucidate further so that they understand whether what I am writing is normal, stress, good, bad, changed, similar, natural. I must always do this. Because as a scientist I am not in the decision-making seat. The engineers are in the decision-making seat. And I must feed the information to them so that they can make the decision from the scientific information. And I think this -- this is comparable.

The next statement happens to have been taken from the University of Rhode Island among the groups represented. And then we are given a list -- represented

bibliographical references? A 609

A Yes.

Q Do you have any opinion with respect to such a heavy reference to bibliographical references as a correct scientific procedure?

A It can be extremely misleading because the person who originally abstracted the original reference had a purpose in mind when they read that paper. And they took from that paper that which fulfilled their purpose. The next abstracter, not having read the original and only seeing what has been the first few sentences, may completely miss a far more important, more pertinent statement in the original reference that is much more valid for their purpose and may in fact either mislead or completely falsify. It's a very dangerous practice.

Q Where is it dangerous? What are the implications to the scientific quality of this document?

A Well, on page 242, it's very nice that my husband has been referenced. There is a reference in the top paragraph to Freudenthal and Lee. That's my husband, the other Dr. Freudenthal. However, the reference shouldn't be there. It's an incorrect reference.

The title -- the beginning sentence to that paragraph says, "Modest guides exist" and a list is given.

Well, for the purposes that this environmental assessment has been made, it's important to know what does this mean? And by reading the rest of the article, instead of --

Q Which article are you referring to?

A I am referring to Eisler's article, 1972.

Q Would you give the title?

A Yes. "Cadmium Uptake by Marine Organisms."

And I have it here. At the very end of the article, in the resultant discussion, Eisler writes, this clearly demonstrates that all species tested accumulated measurable amounts of cadmium in three weeks from seawater that from the public health viewpoint contains theoretically safe levels of cadmium.

So by taking only the data and not taking the interpretation of that data, we have missed a very important point.

Q In other words, the interpretation of that data was in fact presented in that article?

A That's correct.

Q And the interpretation which would be meaningful to a decision-maker was not included in that section to the impact statement?

A That's correct.

Then there is another place -- and I cannot find

point I might make: Very often references are cited. The only references that are cited, again in TRIGOM or URI. And in a number of instances there are glaring omissions where bibles for a particular group of organisms have not been mentioned.

Here, for instance, for the -- algae are -- here we go, benthos: The distribution of benthic marine algae along the New York --

THE COURT: What page are you reading from?

THE WITNESS: I am sorry. 261.

-- is not very well documented. "Any student of marine algae would know that Dr. William Randolph Taylor has written the bible of the marine algae of the northeast coast of the United States, which exactly is in this particular area.

And in the bird section alsothe two bibles, John Bull's book and a two volume set on water fowl are not at all referred to. And there are a number of others also wherein the -- invertebrates, with three main bibles whenever we are examining an invertebrate, we immediately bring out Miner. Well, Miner is referred herein -- in a manner that's almost, well, ludicrous. It's such a minor example of Miner. When Miner's book is the original bible,

fieldbook to the seashore life from Cape Hatteras to up in the Massachusetts area.

And then also the Woods Hole Key, which was developed by the people at Woods Hole, which was also a guide to the invertebrate of the area.

And then Gosner is a guide to the invertebrates also, exactly in this particular area. And none of these are referred to or used or utilized.

BY MR. PICCIANO:

Q Doctor, let me ask you this: What does that tell you or what are the implications in referring to these classics?

THE COURT: Well, I think that's fairly clear. I don't want to cut you off because I know how busy you are with these other things, how many demands are made on your time. How would you rate this as a scientific study,"A plus"or "C" or"B" or "D" or "F"

THE WITNESS: If one of my -- no, I can't even say if one of my students. I don't think one of my students would ever submit anything that had been plagerized to this degree. I think one of my students would know that one normally goes

back to the original.

THE COURT: Well, what grade would you give this for somebody producing this as a book?

A graduate student? F?

THE WITNESS: I think theperson would had to do this was probably in a tremendous rush, and I think for an impact that is going to be on the order of 25 years, I think one should not have been forced to be so rushed that one had to be inaccurate, incomplete, misleading.

THE COURT: Is it unsatisfactory in your opinion? I know you are very kind about the writer, but what about the product? Is it unsatisfactory?

THE WITNESS: For the purpose that it was needed for and needed so desparately, so that someone trying to make a decision could give accurate weight to the values that were presented, so that the person would know how to make a trade-off,I don't think it fulfills the bill, no. I am sorry about it, as I feel badly because I feel a product of the Government that had everything at its disposal to create a superior document that should have led the decision maker from one point

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THE COURT: I am sure you will be available.

THE WITNESS: Can I just hold it for a second in case he asks me something?

THE COURT: Put that on the pad and then we will just all --

THE WITNESS: That's a little neater.

THE CLERK: Plaintiff's Exhibit 58 in evidence.

(So marked.)

THE COURT: All right, bring this to a close, please.

MR. PICCIANO: I will, your Honor, very shortly.

BY MR. PICCIANO:

Q Doctor, let's try to wrap it up with this series of questions.

A Okay.

Q With respect to the areas of referencing material -- Doctor, during the course of the preparation of your testimony did you come across references, scientific references which were published at a time within which the documents would have been available to BLM and which in fact were not referred in the Environmental Impact Statement?

A Oh, yes, many.

Q Would you breifly describe what these -- give the citations and what they talk about and would you tell the Court, please, why and how you consider them to be important to have been included in this document?

A Well, there had been a lot of talk about ichthyofauna and ichthyoplankton, and this is a document, an ecologial study of the ichthyofauna at the Northport POwer STation prepared by Dr. Herb Austin, who is a very reliable fishman. This is New York Ocean Science Laboratory at Montauk and it was made for LILCO. And a very, very valuable --

Q And the date?

A The date '73, May 14, 1973.

Q And was it referenced in the impact statement?

A No.

Q Do you consider the contents of that volume pertinent to the discussions in the impact statement?

A Yes, because it goes into migration, reproductive cycles, spawning areas, nursery areas of all of the relevant fish.

Q Please continue.

A Well, here is one by Dr. John Mahoney at the National Marine Fishery Service in Sandy Hook. "Fin

Rot Desease of Marine and Urea Inhaling Fishes in the New York Bight," that describes the tail and fin rot of the fish in this area, which implies that many of them are already sublethally affected. And the --

Q Is that what you call stress condition?

A Yes, this would be definitely a stress condition. And here we have a varied group of organisms in an area that is already stressed, and I certainly think that the implication of this could have been mentioned in the section on the fish where they were talking about fish and pollution and that the oil is a possibility of a further sublethal stress, being a cumulative effect.

And this is a very reknowned paper that's well known.

I will see what else I have here. There are a number of other papers on sublethal effects of oil on fish, synergistic effects, which by the way, is not mentioned at all, where exposure to one sublethal stress condition will very often enhance the organisms susceptibility to either a second dose or a different stress, and there are a number of synergistic effects.

Taggart's is a very --

MR. PICCIANO: Would yougive the reference, please?

A Yes, this is in Chesapeake Science in 1961. "Reduced Oxygen Tolerance and Toxicity of Petroleum Products to Juvenile American Shad," where the lethality of petroleum products to shad was found to increase when accompanied by low dissolved oxygen. So this is another synergistic effect.

Q Would you consider that to be a reputable document?

A Taggart's? Yes.

I am just trying to pick and choose a few pertinent ones. Oh, Voyer.

Q Title, please.

A Yes. "Effects of Dissolved Oxygen Concentration on the Toxicity of Cadmium to the Mummichog, Heteroclitus at Various Salinities," and this was January 1975, transactionof the American Fisheries Society.

This described the -- the fact that the characteristic pattern, response pattern to heavy metals is known in fresh water fish, but that very often the characteristic response pattern differs in marine fish because of the different methods of entry of the metal, the different osmotic regulatory mechanisms.

In fresh water fish water is absorbed osmotically through the gills and there is an oxygen

effect, and in marine fish, marine fish swallow water, and so there is no oxygen effect because they are swallowing the water and the effect more often . appears in the viscera or in the gut, and there are a number of different articles.

And many times the references in here refer to results on fresh water fish, and now more and more when the articles are coming out, this mode, different mode of entry -- and there is another one I think with mercury --

Q Did you consider that relevant to a discussion of environmental impacts or cumulative effects?

A Yes, I do, because now -- in here, mainly in Appendix 9, by the way, which really should have been in the text, the impact section in Vol. 2, I was very upset with that because I think in the very first sentence of it it says that this is only a synopsis of Appendix 9, which has the real meat.

And I couldn't understand why Appendix 9 was an appendix and not in the text. And when I went to Appendix 9, I realized that Appendix 9 again is stating that this organism took up so much of that anddepurated so much and kept so much for so long, and showed this and that, but again without any meaning to the whole work.

And much of the work has been done on fresh

water fish and much of the work has been done on marine fish, and where the findings are indicated that some of it shows up in the viscera and some of it shows up in the gill, to the uninitiated one didn't -- one can't get an idea of why.

And so at least one article or one explanation was something, and would have solved this difficulty for the person who was wading through all of this and made the two kinds of studies meaningful because of the different modes of entry with the fresh water fish through the gill and the marine fish swallowing the water.

Q Incidentally, Doctor, when I asked you a question as to whether any of these references are referred to in the impact statement I include the Appendix 9.

Have you been answering with that in mind?

A Oh, yes, there are three -- actually there are three bibliographies in here. There is the original bibliography , which was the bibliograph in the draft, and that which was carried over from the draft is in that bibliography. Then there is an addendum which has the few extra citations that are put in every now and then, namely because the commentator told them to put in extra information.

And then there is a separate bibliography for Appendix 9. And Appendix 9 really has the meat --

I immediately went through the list and -- in fact, I found some of them on my own because I wanted to read them firsthand. And then I got curious and I started to wonder how many had really been used.

Q How many of those references appear -- well, first let me ask you this: Do the references that appear in that document as you have described them generally, do they have in your opinion a direct bearing at least according to subjectmatter to the subjects discussed in the environmental impact statement?

A Oh, yes.

Q Now, do you have any comment as to how many and which of these references actully appear in the Environmental Impact Statement?

A Well, 90 per cent of them just in those categories were excluded.

Q They were excluded?

A They were excluded, 90 percent were not used.

In the dozen sub-categories that I looked at there were a total of 394 references and only 38 of them were in the impact statement.

Q In order to expedite this now, can you give us one example, one category with which you are familiar

biological community in volume two of the impac t statement?

A Essentially yes, because one could not even read just the impacts in volume two. It was even explained to the reader that that section was merely a summary of appendix nine. One had to then go for greater detail to appendix nine from volume two impact to volume three, appendix nine.

And then even in appendix nine most of it was a recitation of one to a few sentences of hard data of information taken from the original research, but without interpretation or meaning or interrelationship.

Q All right, now you mentioned certain scientific writings that you said were not referenced or referred to in the final environmental statement for sale 40.

Do you mean by that -- oh, strike that.

And I believe you also testified that there were three bibliographies for it -- for the --

A Yes.

Q -- final environmental statement.

The bibliography that's brought over from the draft statement and a bibliography of additional writings and then a bibliography for appendix nine.

A Right.

Q Are you saying, then, that those scientific

Q Okay, I direct your attention to page 244, 269 and 270 and ask you, isn't it a fact that the Great South Bay is also mentioned on those pages?

A Could you repeat the pages, please?

Q 244, 269 and 270.

A 244, it would --

Q 69 and 270.

A Right.

I don't consider that being mentioned.

Q Doctor, the question is does it appear, Great South Bay, on page 244, on page 244?

MR. PICCIANO: Objection, your Honor. If the witness can only answer the question with a qualification she should be permitted to do so.

MR. HYMAN: Well, I think he's permitted to do it on his examination.

THE WITNESS: I don't --

Q Is it mentioned on page 244, yes or no, Doctor?

A It's the same as if it were mentioned in an obituary, it doesn't mean anything.

Q All right, is it mentioned? Maybe it should belong in an obituary.

A Yes, I see the words "Great South Bay" but

it doesn't mean anything.

Q Doctor, would you please turn to page 269?

A I don't -- I'm not even -- I'm not even certain if there is anything after it or whether it's a typographical error, because if you look what it says underneath it it says "Moriches Bay."

However, in the next two columns it says --

Q Doctor, --

MR. HYMAN: Your Honor, I asked her a simple question, does the words "Great South Bay" appear on page --

THE WITNESS: But there are no numbers after them.

It says "Great South Bay" then it says "Moriches Bay."

In between the two it says 47 and then it says 110 times to the sixth.

I don't know whether it's Great South Bay or Moriches Bay, because the numbers are missing.

Q Thank you, Doctor.

Now, would you please tell us whether the words "Great South Bay" appear on page 244?

A Yes, it appears.

Q So your testimony yesterday that it appears in only two places was erroneous, is that correct?

It appears in three places.

A Well, are you looking for the written word or are you looking for something about it?

Q Yes, I'm looking --

MR. PICCIANO: I think the testimony yesterday was discussion appeared in two places, not the words "Great South Bay."

Q Let's look at page 269. "Conrad (19).

A Oh, that's travesty altogether.

Q Okay, does it appear, do the words "Great South Bay" appear on page 269?

A Let me show you --

Q Doctor, I'm -- just answer, please answer the question.

A It does, but it isn't talking about it.

Q Well, we'll talk about it.

A I'm sorryi Yes, the words appear.

Q And does the statement say that Conrad (19) --

A Conard.

Q C-o-n-a-r-d 1953.

A 1953.

Q Thank you, Doctor.

Describes the benthic marine algae of Great South Bay.

A It says it, but it doesn't -- if you go to table number 244 in the next line where it says "Conard in 1935 described the marine algae of Great South Bay and the coast of Long Island."

Then it refers you to table number 244. If you go to the next page it says -- by the way, this is taken from Smader, Halverdon Dorsen and Stage, distribution of marine algae of New York modified from Conard 1935.

Then if you read along where the locations are except for Montalk Point all of the locations are on the North Shore. Center Island is by Oyster -- so it -- it says it's Great South Bay, and then -- but it isn't.

And then -- just a moment, if I might continue, -- the next sentence, Johnson and York 1915.

Well, wait a second.

Q Doctor, I just asked you if the word appeared?

A The word appeared.

Q I have a very specific question that requires a yes or no pursuant to the Court's instruction.

THE COURT: Excuse me.

Q Your attorney can ask you about it.

THE COURT: Let the witness finish.

no, Doctor?

A He could understand it, but --

Q And would he get an understanding?

A No.

Q That if something is drastically -- drastically happens to anyone of this chain, there will be an effect?

A No.

Q Not really. Okay..

A Not really.

Q So you would like the statement not too simple as you testified on direct, but a little bit more in it, is that correct?

A If you're -- if you mean simple to be -- to be succinct, or you mean simple to be grade school, elementary, I think --

Q Let's say grade school elementary. Let's get back to the --

A No. The -- I think the decision-maker must obviously be a rather intelligent man to have gotten to that position.

Q We hope.

A And I think he deserves more than what a third or fourth grade reader would know. That predators feed on other animals.

Q But if he read this third-grade statement, would he comprehend it?

A Yes. I am certain he would comprehend it. But it would not at all give him a weighted -- there are all sorts of predators that feed on other animals. There are some that are extremely important to that mid-Atlantic area. There are others -- he has to be able to have enough weight so that the balance -- he can see where that balance goes.

Q Okay. You would like a little more in the statement then, right, regarding --

A Of a higher level.

Q Higher level than the third grade level.

A Yes.

Q Let's look at Vol. 1, page 312 then.

A Okay.

Q Food and feeding.

A Yes.

Q Fishes. Now, would you agree that the statement appearing in the first paragraph and second paragraph --

MR. PICCIANO: What page?

MR. HYMAN: 312.

MR. PICCIANO: Thank you.

Q "Fishes are of three very general feeding types types according to Ricker: plankton feeders, bottom feeders,

and fish eaters."

Would you characterize that sentence as -- can we get up to the high school level now?

A Not really.

Q Still third grade?

A Yes.

Q Okay.

Arbitson. Is that correct?

A It's correct.

Q It is correct?

A Yes. It says, "general." It's underlined.

Q General.

A General means it's very third grade.

Q Okay?

A All right.

Q Arbitson -- am I pronouncing that word correctly?

A Yes.

Q 1974 for eighteen species of --

A Demarsil.

Q Demarsil fishes sampled from Nova Scotia to Hudson Canyon, reports that the five most important prey groups were fish --

A Crustaceans.

Q Yes.

Q All right, now, with respect to Vol. 2 have you formulated any comments as to the discussion of the treatment of the environmental impacts as described in that volume?

A Yes, Vol. 2 contains most but not all of the value judgments that are made. It deals with impacts, mitigating measures and other NEPA topics.

There are a number of statements in Vol. 2 that I consider to be -- although each sentence taken as a subject and a verb and a predicate may be true, the compilation of them into a section becomes misleading and almost an advocacy statement in favor of the proposed activity.

Q Well, can you cite some examples to support that?

A Yes. I think at page 109 of Vol. 2 might be one such. There is a section in 109 of Vol. 2 which is a part of III, "Environmental Impacts of the Proposed Action," B, "Impacts of Oil and Natural Gas Operations on the Natural Environment," and then under the subtitle of "Heavy Metals" this discussion proceeds on page 109 over to page 114, and nowhere in the section does it happen to mention that heavy metals are toxic.

For example, let me read you a series of sentences taken from the first paragraph, 109:

"Heavy metals occur naturally in sea water in relatively low concentrations." That's true, no argument.

"In the coastal zone, especially in estuaries near river mouths or municipal discharges, concentrations may be much greater than natural background levels."

That's true. Note that it doesn't say why. It just is there. That's true.

"Fourteen trace metals are known to be essential for animal life."

Well, that's probably true. There may be more. I can't swear to that. But it's a true statement.

"They serve as components of enzymes, enzyme systems, activators, components of vitamins, hormones and respiratory pigments."

That's true.

Heavy metals are also toxic to marine organisms. That doesn't appear there. It doesn't appear in the rest of that subsection.

Now, it does appear, and toxicity levels are given in Appendix 9, which is referred to in the text.

However, I think decision-makers are not in the habit of reading every appendix and footnote in a document. They expect the text to describe the situation openly, honestly and fully.

That section on heavy metals is not such an open and honest and full disclosure statement.

whoever did it or the committee that did it -- that he didn't have an advance of these criteria. It seems to me that you can't draft a document presenting those risks even though you don't have the criteria in advance. I am not criticizing the writer of the document. I believe they did the assignment that they were given in good faith, in good conscience, as thoroughly as they could, given the materials that they could get in the time they were allowed. That's the important factor.

THE WITNESS: I don't claim that the -- it is the authors themselves who are responsible for what I consider to be the failures of the document. I believe that much of that was a function of the assignment. The authors, I don't believe, were given sufficient time. They were forced to fall into the literatures traps that Dr. Freudenthal described this morning. It is not the fault of the people and I am not in any way criticizing the individuals who did their best to put this together.

I believe that they were working in a system which does not allow them to meet the spirit of the law.

THE COURT: Well, could it be -- could they -- anybody have drafted a document without the a priori

determine whether there is in fact a cause-and-effect relationship between the development of cancer in clams and exposure to spilled oil. That is something that our laboratory is working on. We have been working on it for -- well, since the seaport spill in Maine for several years. We have circumstantial evidence that tells us that the only place we find cancer in clams is where oil has been spilled. But we don't have the cause-and-effect relationship, the laboratory back-up work in which we would induce cancer in clams by oil. And it may in fact be one of those things which is going to be resisted to prove for additional years.

Q What specifically are you --

A The problem is that there is a fair amount of effort put into that -- in the study plans and it is not the kind of information that is going to be useful either before or after the fact.

Q After what fact?

A Of the -- of production of oil in a given place. It is not going to tell us where we might safely put platforms. It is not going to tell us whether we put a platform there and we found a population of shellfish that couldn't be used because they have developed tumors, we couldn't demonstrate that that platform caused it. It certainly isn't a useful piece of information for this purpose.

Is it your testimony that the bench mark approach as opposed to predictive approach of the study plan would be less useful than the proposal that you submit?

A I don't completely agree with that because there are aspects of a bench mark which are necessary in order to determine you know what the starting point was. There are parts of it that are going to be difficult to measure. The --

Q Let me ask you this, Doctor: What would be the value of a comparison, a bench mark comparison, assuming that the study started today, production occurred, and then the studies continued to show your comparison of, for example, levels of hydrocarbons and trace metals in indicated species?

THE COURT: Excuse me, I don't want that inquiry. I am not interested in that. I am interested in whether studies must be made before the basic decision to lease is reached.

I am not interested inwhat happens thereafter.

Q Doctor, moving along to another subject, do you have any knowledge within your own experience, do you have any personal knowledge in other words, as to the kind of data which is now being collected by the National Marine Fisheries Service?

A Yes.

Q And specifically the MARMAPP Program?

A Yes. The MARMAPP Program is conducting one or two cruises a year.

Q Let me interrupt you, Doctor, what does the MARMAPP stand for, what does it mean?

A I was afraid you were going to ask me for that. It's the Marine Research Monitoring, I believe, Analysis and Predictive Program . It's run by the National Fishery Service, Department of Commerce. They conduct two cruises a year offshore. Actually the program is conducted in the Atlantic, Pacific and Gulf Coasts, but there are stations offshore in the area inquestion here, the Baltimore Canyon Trough, in which plankton data, both the larvae and juvenile fish plankton and the zooplankton plankton which are ubiquitous and present inthe water all the time, and the meroplankton which are the larvae and organisms which are not plankton adults, such as the Mahogney quohog , the hard shell clam, the sea scallop, the lobster, they do not do phytoplankton to my knowledge because there are standard measure sizes and they are not too big and the phytoplankton go right through but they do collect these twice a year over a very large area of ocean in reasonable fine geographic detail. I don't know

how far apart their stations are but I thinkthey are adequate to use in judging the area in question if one does not just consider the tract sites themselves but the impact on the area from their inshore --

Q Doctor, assuming that some of this -- I assume it's raw data, would you describe it as raw data?

A Some -- it's in varying stages of readiness. Because, for example, the fish larvae data I believe is given their highest priority because they use that data in a model which the International -- it's called ICNAF, International Commission on North-Atlantic Fisheries -- this commission sets quotas every year for various nations fishing activities, and these data that National Marine Fishery Service developed --

Q Is this valuable data?

A Yes, I believe it is very valuable data.

Q And assuming that this data could be analyzed and taken from its raw form and put into some useful form, what form specifically would you like to see this carried into?

A Well, I would like to see it --

THE COURT: For what purpose -- I don't understand where we are. I want you to focus on the decision I must make by August 17th.

with in any adequate form.

Q Well, if I were to tell you that the statement, that the Environmental Impact Statement, contained a statement that said -- we will use the example you used in your direct testimony -- referred to the fact that a whole year's class of fish could be decimated, isn't that a discussion of what the impact might be for fish?

A No, that is a description of the event but not of its consequences. But whether -- you see the basic question is will it pass the "so what" test? So what if a year class is wiped out. That's the answer that I think the decision-maker is looking for and any decision-maker worth his salary will always face a piece of information given him with the question "so what"? Does it matter? If it matters it will be factored into the decision, if it doesn't matter, it shouldn't be.

But whether ornot -- you see this document fails to say, the scientific staff of this agency believes that that matters. That's what it doesn't say. Or that that doesn't matter. It's not in there.

Q And you think that this kind of value judgment would be proper for this document?

A Yes.

Q That's not enough to say --

MR. BIALIK: Just for clarification, is the last question in reference to the Georgia Banks?

MR. JENSEN: Yes.

Q You said you were critical of that program? I take it --

A What program?

Q The environmental study.

A The study program and the RFP that was put out by BLM, and also some of the special projects that are --

Q But were you not a -- they were put out by the --

But were you not aware that Dr. Teal and his group were doing that work?

A My point is it isn't who is doing it. My point is that what has been laid out by the assignment by BLM is not a very prudent use of their resources for environmental analysis.

Q In other words, this --

A I don't really care who got the contract.

Q I understand that. But, in other words, this environmental -- this environmental study program, in your opinion, was a useless exercise by BLM people who are going to do the work?

THE COURT: Excuse me. I am not interested in this. And if you -- you persist on this inquiry, your cross-examination will be completed.

MR. JENSEN : All right, your Honor. I am sorry.

Q Did you submit a proposal to do this work?

A No. I believe it's the agency -- the Office of Research and Development, against the advice of our laboratory, did in fact enter into some agreement to do the special projects relating to the Georgia Bank work.

Q Did you submit a proposal to do risk analysis for BLM?

A No. We don't want to. As a matter of fact, our senior scientific staff at the laboratory met and decided that we would frankly rather see some of that money go into spill prevention control technology and have it go to the engineers rather than spend our time out on the continental shelf chasing fish.

Q So your proposal, just as a hypothetical exercise --

A Yes. It was something that we hoped BLM would substitute for its kind of RFM that it was putting out. Our laboratory had enough to do without getting involved in this sort of thing.

MR. JENSEN: All right. I will turn it over to Mr. Lyman for the couple of questions on the fishery data.

CROSS-EXAMINATION

BY MR. HYMAN:

Q Doctor, did you meet the New York flight of American Airlines in Providence yesterday?

A Yes. You know I did. You were on it.

Q You were on the Government payroll yesterday?

A No. I was on annual leave.

Q Your own leave time?

A Just as I am today.

Q Did you drive myself and Mr. Bill Dodene to an office in Narragansett?

A I did in my own personal vehicle.

Q How were those arrangements made?

A How were the arrangements made?

Q Yes.

A Through conversations with Mr. Dodene and --

Q And did there come a time when the offices -- or sufficient office space was not available to take the deposition that you offered -- you kindly offered the services of your facility, HTA?

A I called and asked if the conference room was available at HTA. This is a common occurrence between our two [illegible] in that there are [illegible] from the [illegible] who was being deposed.

a Mr. --

A Merrick.

Q Prior to that deposition yesterday, did you ever have any conversations with Mr. Merrick as to the nature of his testimony that was to be had yesterday?

A Yes. I spoke to him the day before.

Q And in addition to that conversation, did you supply him with certain documents to look over?

A Yes, I had.

Q Were some of those documents a letter addressed to various NOA agencies by the County Attorney of Nassau County?

A I believe one of them was.

Q Well, how did that document come into your possession?

A Mr. Picciano --

Q Gave it to you?

A Sent it to me.

Q Did Mr. Picciano give you an outline of the testimony of Mr. Frank Basile in the New York Office -- his testimony?

A Of Mr. Basile's?

Q Or some comments of Mr. Basile that he gave [illegible]

A That document.

Q Consisting of three pages?

A Consisting of three pages. And contained in it a typewritten copy of some handwritten notes that Mr. Immora had made or someone had obtained from him.

Q How did that document come into your possession?

A Mr. Picciano sent it to me.

Q In addition to that, there was a one-page document that you turned over to the witness, also containing information regarding fishery resources; is that correct?

A The information, as I understand it, was information that BLM had from NMFS.

Q Now, you have had that information in your possession prior to yesterday?

A Yes. The day before yesterday.

Q And --

A I gave it to him the day before yesterday. Not yesterday.

Q Now, when -- but when did you first get the document?

A Perhaps a week before that.

Q A week before that. In a week before that -- a week before yesterday, did you know what data was available?

A No.

Programmatic PDOD and the site-specific for lease sale No. 40 PDOD.

Q Now, Dr. Atkinson, what was the purpose of your review of these documents?

A My purpose was to determine in general the adequacy of the environmental impact statements and in particular the adequacy of the treatment of the alternatives within the environmental impact statements.

And secondly, I was concerned with the benefit cost basis on which the analysis was -- on which the decision was made for adopting the national program, and in particular lease sale No. 40.

Q All right, Dr. Atkinson, do you have any comment on the treatment in the impact statements and the PDOD's of the subject of alternatives?

A Yes, I do. In my view, and from my point of view as a professional economist, I felt that the treatment of the alternatives or the treatment of many of the alternatives was very inadequate in the impact statements.

The first thing I would like to point out, the one alternative that was not considered at all was the alternative of not treating self-sufficiency at some date certain in the future. Throughout these documents, the goal of self-sufficiency by some date certain, be that 1985 or 1980,

depending on the time frame that we are considering, that particular goal itself was never seriously scrutinized in the environmental impact statements, and the first thing, it seems to me that one ought to do is raise questions about the desirability of that particular goal.

We have to recognize that the particular goal involves basically two questions: There is in the first instance the question of imports per se. Is there a benefit per se associated with the reduction in the volume of imports?

And secondly, there is the question of the security of supply.

Now, from the point of view of the goal of project independence it seems to me this is quite a major action, especially in the context or in the manner in which it was presented initially, a major action that has significant implications for the environment and involves a massive commitment of capital and labor resources generally in order to attain that particular objective.

But was there a critical evaluation of the goal itself? And in general I could find no evaluation at all. Rather, I could find references connecting the national program and lease sale No. 40 to the goals of project independence.

I find, for example, if we take a look at the

environmental statement in the Programmatic in Vol., page 159, for example, what we are presented with there are historical projections of the demand for and the supply of oil over time, and the conclusion, which is rather obvious on the basis of the historical projections, is that we should be concerned with increasing imports over time.

In the final environmental statement in the Programmatic, Vol. 1, page 12, the goal of non-dependence is stated, and it is accepted without any analysis that we should in fact reduce our imports and that if in fact we have reduced our imports -- if in fact we had OCS production now our imports would be substantially below what they currently are.

Also in the final environmental statement in the Programmatic, Vol. 2, pages 284, 285, we are told that the national goal of energy independence by 1985 requires each domestic energy resource to contribute as much as possible to meet our nation's energy needs. And we are told again that OCS production is no exception to this principle.

Just as a final citation, in the final environmental statement lease sale No. 40, in Vol. 2, pages 576 to 77, once again we find the emphasis being placed on the historical growth of the demand for and the supply of energy, and there is also a vague reference to the limited

Now, the first thing that one must do is raise the question about what the goal in fact means. Now, if we go back and look at the initial statements that arose when the initial program was promulgated in 1973 by the then President Nixon, we see energy independence meant zero imports by 1980.

In the project independence report we find an analytical definition of project independence. That analytical definition is not one of zero imports. Rather, if you look at the project independence report, and in particular I'll merely cite the page on which this is contained, page 406 of the Project Independence report, there is a recognition of the fact that the attainment of increasing levels of independence involves increasing costs, and reductions in our vulnerable supply of imports attains for the nation benefits. As we reduce the amount of our vulnerable imports presumably there are increasing benefits.

And one obtains analytically that level of imports at which the additional cost which we as a nation incur, matched by the additional benefits which we obtain by reducing our vulnerability to insecure imports.

Now, currently the policy is much different than it was originally stated. If one looks, for example, at the State of the Union address by the President on January 15, 1975, which was stated in the -- which was

presented in the Congressional Record, and also if you look at President Ford's March 1, 1976 National Energy Program message, which was also printed in the Congressional Record, we see that energy independence by 1985 now means reducing the volume of our imports to the neighborhood of three to five million barrels a day.

Now the question, it seems to me, that needs to be addressed at the outset is the one of whether or not we can achieve that particular objective of the 3 to 5 million barrels a day by 1985 without an accelerated development strategy of which accelerated leasing on the outer continental shelf is one element.

In point of fact, if there were an adequate analysis of the market itself we would see that it is possible with a sufficient increase in the price of energy for us to in fact obtain substantial reductions in the volume of our imports. Higher prices lead to reductions in the quantity being demanded, and higher prices also lead to increases in the quantity supplied, especially given a sufficient amount of time for the attainment of that.

(continued next page)

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A (Continuing) In point of fact, take a look at the Federal Energy Administration's recent national energy outlook published in 1976, we see that on the basis of projected future price of oil -- the basis of the expected future price of oil, and on the assumption that the conservation measure embodied in the energy policy and conservation act of 1975, that on the basis of the expected future price of oil itself, and those conservation measures, and without an accelerated development strategy, and without mandatory conservation measures projected in our import to approximately 3.4 million barrels a day, it's certainly within the ballpark established by President Ford as the target for 1975 -- I mean 1985 -- excuse me.

Now, nowhere do I find an establishment in the environmental impact statement of the implications of the higher prices for energy and the implications of the energy policy and conservation act and the mandatory conservation measures spelled out for the national program for lease sale No. 40.

One can in fact find vague references to the consequences of higher prices. But in point of fact there is no detailed analysis of the operation of the market and the implications of the higher prices for the national program for lease sale No. 40.

Government intervention. On the other hand, it is concluded that if government intervention is required, that means that the action would not be undertaken voluntarily, and, therefore, they impose net costs on the consumer.

It is also added on page 10 that as long as the total cost per barrel of OCS oil is less than the price of oil, it is better to increase OCS production by one barrel than to conserve an additional barrel through mandatory conservation. This is true because the barrel of production has a price paren value close paren in the exercise of its total cost. Thus, it provides a net savings if it is produced. Mandatory conservation, on the other hand, has net cost.

Now, there are several difficulties with the analysis of the conservational alternative. The first is that government intervention, if it is required, imposes on society the net cost. But it is widely recognized that when there exists market imperfections, the government by actually intervening can in many instances rectify a situation so that the action which it takes generates net benefits, not net costs.

Certainly, in this area, there are in fact a

lot of market imperfections. We find, for example, we know that it will be better in fact if people were to insulate their homes better at the point of construction. Although there will be a higher cost at the front end, the discounted cost savings in energy used over time will more than offset that initial cost. But part of the problem with the housing market is that all houses, well insulated and not so well insulated houses, compete on an initial cost basis. And in many instances, the consumer is generally ignorant of how much it will cost to in fact heat and run the house. And also the highly mobile nature of the American homeowner is such that if the initial investment takes several years to recoup, it is not -- he's not particularly anxious to lock himself into that high initial investment.

This is -- for example, a case which is emphasized by the Federal Energy Administration in its Project Independence report, as suggesting a situation in which it is quite appropriate for the Government to intervene -- and certainly, also, if we look at the costs that are involved in acquiring information about the energy efficiency, and also the kind of demand which we would have to make on

$13 a barrel, in 1975 prices. That is, the actual price that will be paid in 1985 is anticipated to be in excess of $13, but it is corrected for inflation to put it on the same basis and comparative basis with 1975.

Q You referred to ERDA. Is that the Energy Research and Development Administration?

A Yes.

MR. ZEITROSSER: Not, at this point I intend to read portions of the deposition of Hughes that is already in evidence and then ask the witness a question about that.

Q There is a reference in here to Exhibit 15 that refers to the Programmatic of PDOD.

I am reading from page 185, beginning at line 3.

"Question: Now, referring to page 10 of Exhibit 15, I refer to the paragraph beginning in the middle of the page and to the bottom line in which the statement is made, well, let me read the entire sentence, quote, these measureswquire intervention because they would not otherwise be undertaken by consumer close quote --"

MR. HYMAN: Your Honor, I object to the use of the deposition.

THE COURT: Yes. Just a minute. We will take

MR. ZEDROSSER: Your Honor, I think it might be just as well if I start the reading of that question over again. We didn't get very far into it.

THE COURT: Yes.

Q "Question: Now referring to" --

MR. HYMAN: Excuse me, your Honor. At this particular point in the deposition I have got to remind the Court that Mr. Hughes is not a government employee, was not a government employee at the time the deposition was taken, that his testimony, no matter what -- and I don't think it's even relevant to the issue before us here -- is not binding on the federal government.

THE COURT: Nothing is binding on the federal government, but I am going to accept it as evidence. Are you objecting on the ground that it's hearsay/ What is the objection?

MR. HYMAN: Well, the objection is that Mr. Royston Hughes was not produced by the Government as a witness on this subject.

THE COURT: Excuse me. What is the objection? It's being introduced in evidence. Now, what's the objection?

MR. HYMAN: Well, the objection is that the

federal defendants are not bound by this testimony.

THE COURT: Nobody's bound by any testimony. It's evidence. I'll give it whatever probative force I believe it has. No evidence binds anybody.

Proceed.

Q "Question: Now referring to page 10 of Exhibit 15, I refer you to the paragraph beginning in the middle of the page and to the bottom line, in which the statement is made -- well, let me read the entire sentence: 'These measures require intervention because they would not otherwise be undertaken by consumers, presumably because they impose net costs on the consumer.'

"Would you tell us what net costs are referred to in that sentence?

"Answer: It is my understanding that the net costs referred to would cover a whole range of topics.

"Question: What kind of net costs are you referring to there?

"Answer: Creature comfort, the quality of the ride, the very thing that the American consumer has refused to abide by because he is now buying larger cars again.

"Question: So these costs are social costs?

"Answer: To the best of my recollection."

Turning now to page 186 of the same transcript, line 6:

"Question: I refer you to page 11 of Exhibit 15, specifically to the sentence beginning on the third line, which I will read; 'However, as long as the total cost per barrel of OCS oil is less than the price of oil it is better to increase OCS production by one barrel than to conserve an additional barrel through mandatory conservation measures. This is true because the barrel of production has a price paren value and paren in excess of its total cost. Thus, it provides a net savings if it is produced.'

"Could you tell me what those sentences mean?

"Answer: Those sentences basically refer to the economic theory about the social cost of production as opposed to the actual cost of production. And I won't attempt to give you a detailed interpretation on that.

"Basically, the sense of this statement is meant to be that if in fact we locate and produce a barrel of domestic resource there is a value to the society above and beyond the actual dollars per barrel

of that oil because the difference between the cost of production and the transfer costs and the costs, the selling price, are put back into the economy of the society.

"The conservation issues, on the other hand, are a negative value in the terms of the dynamics of the society, imposing a negative value, having people do less, either making fewer cars or fewer roads. It is in a sense talking about social costs, not dollar costs.

"Question: You are talking about the total cost per barrel of OCS oil. You were talking there about dollar costs or social costs?

"Answer: I am just talking about a social cost, the cost to society by imposing a negative conservation measure that is greater than the cost to society by developing or producing an additonal barrel of oil, because the production of that oil implies in the sense of the Gross National Product a ripple effect throughout the economy, and I don't profess to be a sophisticated economist like Dr. Gaskins or Dr. Moffett or Shirley, the architects of these words, but it talks about the social cost of an economy which is expanding as opposed to an economy which is negated by

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conservation measures."

Finally, I turn to page 193 at line 2:

"Question: Now going back to the sentence on top of page 11, 'This is true because the barrel has a price in excess of its total cost.' Are you there talking about social costs or economic costs?

"Answer: I'm not talking about it but the statement is talking about social costs, social value, perhaps price is the wrong term.

"Question: All right, what does the term price refer to; is that the dollar price or the social price?

"Answer: It's my interpretation that that's a social price.

"Question: So it's a social price in excess of its total social cost; is that what --

"Answer: That's my understanding, yes."

Dr. Atkinson, do you have any comment regarding the analysis of conservation expressed in the answers to the questions which have just been read to you?

A I have a difficult time knowing quite where to start on. I mean there is a considerable amount of confusion of social cost, economic cost, social price, dollar cost, actual cost, and this is part of the problem with -- with,

I think, thinking in this area.

What -- what we have to do, it seems to me, in terms of thinking about this is to try to substrate what we are talking about. Now, as I understand, the PDOD and the arguments --

MR. HYMAN: I object to the answer, your Honor. He asked about a series of questions, does he have an opinion or can he discuss it. And the witness is now going off on a whole line of things which indicate that he really doesn't have an opinion or doesn't have an answer to the question as posed.

MR. ZEDROSSER: It's part of the question --

THE COURT: Overruled. The witness obviously has an opinion. He is just too polite to show bluntly how contemptuous of it he is. So he's explaining it more politely.

You may continue.

THE WITNESS: Part of the problem here is that the way I understand it is that when they are talking about the difference between the costs of producing a barrel of oil and the price, the costs basically that they are talking about are the costs, all costs, including the normal rate of return, required in order to get and commit the resources to OCS production and

to maintain them there . producing oil.

The difference between that cost and the price we in economics refer to as the rent. And the question is then who gets that rent, and that's the reference to, I suspect, the transfer costs.

Now, if we add to those private costs the costs which are required in order to commit and to maintain resources on the outer continental shelf, the environmental costs, then we have a social cost figure.

Now, conservation on the other hand saves a barrel of oil, and the savings itself would yield net benefits as long as the costs do not exceed -- you know, the costsof obtaining that level of conservation do not exceed the price of oil itself.

Now, there is no question here of a social cost, social benefit, social price. I -- I don't understand that language. But simply it's possible that there could be net costs, it's possible there could be net benefits if the costs that we as society have to incur in order to save a barrel exceed, you know, the price of that. There could be net costs, and conversely if the savings and energy used is less than the cost of attaining it, then there are net benefits.

Now, it's been concluded here simply that there

are not costs, and for all the reasons that I have indicated earlier there are several problems with blandly concluding that there are net costs simply because the implementation of the various measures require mandatory intervention on the part of the Government.

The other aspect that troubles me is the reference to the fact that conservation is a negative value, it means do less, as he states, "fewer cars and fewer roads," and that this exerts a ripple effect and presumably a negative ripple effect.

Now, there is a very serious problem with that sort of thinking, at least from the point of view of an economist, and that is if -- he's got it turned around: By expanding production on the outer continental shelf we are in fact committing resources, saving oil on the other hand, and that frees up resources for use elsewhere. And then that becomes basically a question of stabilization policy, as to whether or not we conduct monetary and fiscal policies for the purpose of achieving desirable levels of employment.

And in point of fact, conservation frees up resources for use elsewhere, whereas expansion of the

outer continental shelf, you know, involves a commitment of resources. And it's on that basis on which we should ask ourselves whether the attainment specifically of the goal in question -- whether the attainment of that goal -- whether there are greater benefits to be derived from the attainment of that goal by accelerating leasing on the outer continental shelf versus, you know, conserving.

Q Do you have any further comments regarding the conservation measures in the EPCA?

A With respect to the conservation measures themselves, I only have one, and that is -- and this is something that was emphasized in the Ford Foundation study, "A Time to Choose." The conservational alternative provides us with greater alternatives with respect to what we shall do with our available resources, provides us greater flexibility in determining how those resources should be utilized.

At the moment, we tend to remain largely ignorant of the extent of the hydrocarbon resources both proved and unproved that we have available to us, and certainly one advantage arising out of the conservation alternative is that it provides us with greater flexibility with respect to supply.

that's the trouble I have, is the failure to deal with the market and the fact that we -- we could have done better.

THE COURT: Well, maybe the draftsmen were too humble. I suppose in this area a little humility by decision-makers is probably desirable.

THE WITNESS: I have -- I have no problem with humility on the part of decision-makers. But simply that we could have done -- we could have got a more adequate assessment.

And to the extent that one might disagree with the assessment provided by some of these models, you would at least have a basisupon which to depart from the results. And that's -- that's the basic problem I have with -- with their consideration of the other supply alternatives.

Q Did they in fact utilize the methodology in the University of Oklahoma paper/

A The University of Oklahoma paper in terms of their discussion of -- of the methodology itself imagined a major action, and if my recollection of it is correct, it did not deal with the specific question of outer continental shelf leasing, it dealt only with the question of I think it was coal gasification plants, or some oil shale plants --

I can't remember the precise major action that was considered

But then they described how the system could be used in order to assess alternatives to it.

Q And did the impact statements use that system?

A No, the impact statements did not. The impact statements did, however, refer to the Oklahoma study for a discussion of the alternatives, in view of the fact that their discussions in the environmental impact statements were brief.

Q All right, could you then continue with your comments on alternatives?

A All right, I -- another thing that -- that basically troubled me in terms of the environmental impact statements was that there was no attention given to the alternative of strategic stockpiling of reserves or the implementation of emergency conservation measures.

Now, this is currently mandated under EPCA. There is a program that is in the process of being implemented and being studied for a strategic stockpiling of reserves and emergency conservation measures in the event of another potential interruption, you know, from the Mideast.

The question we really have to ask ourselves here is whether or not that particular alternative is perhaps capable of doing the trick, that is of achieving this goal of -- of -- of project independence, and should it ever be

situation in which to the extent that the bonus bids are lower, to take account of the fact that there are significant exploration costs, the federal treasury is already bearing part of the risk. The federal Treasury is already making an indirect payment, if you will, for the -- for the exploration.

But more important, the kind of emphasis which they give to the question of added knowledge, saying the only real advantage, with the emphasis on "only" would be the added knowledge, is -- is a little troublesome, because one thing that we as a nation have to face at this point is the fact that our conventional sources of oil and gas supplies are in fact dwindling, and we have to be concerned with the question of how we make an orderly transition from conventional sources of oil and gas supplies to non-conventional sources.

Now, one major question that must be answered is the extent of the hydrocarbon resources that we have available to us for the purpose of making such a transition. Now, if it turns out that the resource estimates, especially of the undiscovered recoverable resources, turn out to be relatively low, and if it turns out that there is going to be a very lengthy lead time before we develop the kind of technology and solve the environmental problems, associated with alternative sources of supply, and if in fact future oil

imports turn out to be as insecure as at least most people believe they are today, then knowledge of the extent of the hydrocarbon resources which we have available to us is essential.

If in fact the extent of the hydrocarbon resources which we have obtained by conventional means is relatively small, then this could well call for a somewhat slower pace of development.

On the other hand, if they are very extensive it could call for a somewhat faster pace.

Now, this per se does not necessarily imply that if exploration were to be separated from development that we should rush out and explore, necessarily. I think that we have to engage in the same kind of cost benefit analysis, because there are environmental impacts associated with that.

But if the decision, as I started out saying, if the decision is made to go ahead with the national program, then I think the added knowledge which we obtain is a rather important reason for separating exploration from development.

Now, under the present system the Department of the Interior does not deny the right to produce after hydrocarbon resources have been discovered in commercial quantities. Indeed, and quite rightly, from the point of view of the oil companies, they have a very strong incentive

to develop those resources after having made considerable commitment of capital and labor, and it's rather important, especially if there are relatively stable projected future prices, it is relatively important for them from the point of view of the return on their investment to develop those resources rather than to sit on them and -- and to wait.

Now, there is a second aspect associated with this problem of separation of production from expiration, and that deals with this question of whether or not we as a society obtain a fair return, which is required by the Department of the Interior, a fair return for the resources which are owned by the United States.

I think there is basically three reasons why I think that we are obtaining a somewhat lower rate of return than we could obtain. On the first instance, if we had some knowledge of the extent of the resources which existed on the outer continental shelf, we would eliminate to a considerable extent many of the uncertainties which now cloud the picture as far as the oil companies are concerned.

And to the extent that the oil companies themselves are risk-averse, they value, they value the reduction in the uncertainty, and that tends therefore to cause them to increase the present discounted value of the economic rent which they could obtain from those hydrocarbon resources on any

given tract.

Under the current system to the extent that firms are risk-averse there are suggestions that they in fact bid below the expected present value of the rent on the tract.

Also it has been suggested that because of the terrible risks that the oil companies have, especially engaging in exploration, which is an exceptionally risky business, that the cost of raising capital tends to be somewhat higher than it is for alternative investments, and therefore the rate at which the oil companies discount the value of the resources on the outer continental shelf tends to be higher, and therefore the present discounted value tends to be lower, through discounting with a higher rate of interest.

And third, there has been a suggestion that the separation itself could increase the level of competition among bidders. It is not the level of competition for production but the level of competition in the bidding process.

As -- as it exists now, it is very difficult for many companies, and especially the small companies, to obtain capital to bid on and explore, but to the extent that we have some knowledge of the extent of the resources out there that could in fact be provided by exploration, then presumably the capital markets could in fact operate in such a way that

resource value of the tracts in question could themselves be some security. It would generally be increased bidding indeed, to the extent that there were tracts that were very rich, and other tracts that were not so rich. We would tend to find substantial bidding begin with that kind of knowledge, and therefore we could tend to find there would be significant pressure to bid away a significant percentage of that economic rent.

Now, it is also true that -- and this has been raised in several quarters -- it is also true that the accelerated offering at this time, it has been suggested, could in fact reduce the bids, the bonus bids which were made, and therefore the public would not be guaranteed a fair return for those resources. If we --

THE COURT: Again, that wouldn't be a reduction in gross, it would be a reduction per unit.

THE WITNESS: Well, except that the way that the bonus fits -- it would be -- well, let's put it this way: To the extent that there is a sharp increase, as there is here, in the leasing of acreage on the outer continental shelf, and to the extent that that imposes considerably on -- an increase in uncertainties on the part of the oil companies, since a complete inability to kind of evaluate the massive,

you know, kind of program, you know, under this accelerated leasing, it has been suggested the increase in uncertainties could in fact lead to smaller bids.

THE COURT: Well, I understand that, but you are not suggesting that the total received in any one year, next year or this year, would be less than it otherwise would be if they let it out in smaller units?

THE WITNESS: I am -- I am suggesting that if -- that in fact that could happen, yes, the reason being the way in which the system works: that is, it's a bonus bid plus a fixed royalty. Fixed royalty is based on the gross value of the oil that is extracted, so that presumably it will not change to the extent that the expected value of those resources does not change.

But what is -- what is somewhat smaller is going to be the initial bonus bid, so that the total value of what goes into the Treasury would be smaller than it would otherwise have been.

THE COURT: Well, would the total cash that goes into the Treasury be smaller?

THE WITNESS: Oh, no, not necessarily at all.

THE COURT: I would think --

THEWITNESS: I mean the total cash, I suspect,

would probably rise.

THE COURT: No, I mean just in this one year.

THE WITNESS: No, I suspect it would probably rise.

THE COURT: I would be willing to --

THE WITNESS: What we are talking about is the return on these resources. We are talking about the total cash in years previously, but based on a smaller resource base.

THE COURT: That's what you are talking about, but that's not necessarily what the Administration is talking about when it is trying to increase during an election year the cash flow so it doesn't have to increase taxes this year.

Again, you are talking about it from the point of view of the good of the total economy over the long run rather than --

THE WITNESS: Well, I am talking about the requirement -- I am sorry?

THE COURT: Rather than the good of the political person who is trying to stay in office. These are factors that it seems to me have to be considered, unless as a legal matter they no longer can be considered. That may be true. I would doubt it.

MR. HYMAN: I wouldn't presume that, your Honor.

THE COURT: Go ahead. He's a very intelligent witness. He's going to say what he wants to, anyway. Go ahead.

THE WITNESS: In response I would say that the environmental impact statements and -- and also the POOD's do not deal adequately with respect to this question of exploration and development.

Fundamentally -- we talked about the possibility you know, the fair rate of return, but fundamentally the real issue in terms of the separation of exploration and development is the fact that with exploration being separated from development we retain control over development. Control over development for two rather important reasons: to the extent that we can identify the extent of the resources on the outer continental shelf we will have a much better idea of the pace at which they ought to be developed in order that we can make this transition away from our conventional energy resource base to non-conventional. And that becomes a very critical issue.

And secondly, it will also enable us to have a better idea of the kind of environmental impacts which we might experience by developing on the outer continental

shelf. And it might be possible that with increased knowledge there would be instances where we would argue that it should not be developed, for environmental considerations.

On the other hand, there are clearly circumstances where we might argue that it should be.

My basic point here is that it provides us with control, we do not lose that control, and under current legislation the Department of the Interior does not cease it to stop production after exploration in general.

THE COURT: Your position is that it would not slow down ultimate production if they proceeded this way and decided to proceed expeditiously?

THE WITNESS: Well, there is a serious question about it. Here I have to rely --

THE COURT: Wouldn't it in effect slow things down because you wouldn't have the same people exploring and producing, necessarily?

THE WITNESS: Well, I don't know what particular plan we might adopt in terms of exploration or development. I mean there are various ways in which -- and -- and incentives that might well be provided to those who would currently do exploration,

incentives of -- of all sorts.

THE COURT: Well, it would certainly slow things down, you'd have to make another decision on production, and this way you just slide into the whole operation so that the producers, who are also explorers, will produce as expeditiously as they can in order to recoup their lease payments.

So if you are interested in fast production this is clearly the way to do it, isn't it?

THE WITNESS: I'm not sure we are interested in fast production. I do not know the extent of those resources and I do not know the length of time that's going to be required for us to make a transition. We could develop those resources very rapidly at the moment and find ourselves fifteen to twenty years from now with very, very high-priced energy, with significant environmental problems in dealing with the alternatives that are available, and with not having developed the technology.

On the other hand, it might not. But that's the kind of unknowns we are dealing with.

THE COURT: That's so general a judgment, you are moving into the political area again, which requires you to engage in the equation of the

possibilities of war, short-term possibilities of shutting off of our oil supplies, either by the OPEC nations or by the Russians sinking our ships, or for whatever reason. These are not purely economic analysis problems or problems that can be dealt with in terms of classic or current economic analysis.

And although these factors aren't considered in the various statements, really don't they lie behind the judgments, whether you agree with them or not, that are made by the President and by his chief executive advisors?

THE WITNESS: I think -- I think this turns on a very fundamental issue. That is one thing we do not now have in effect is a comprehensive national energy plan.

Now, the plan which has been introduced by ERDA, which will no doubt receive a great deal of discussion -- it has already received some discussion -- is a plan that deals explicitly with this question of how do we make the transition and how do we make an orderly transition?

Now, it's not clear that this calls for very rapid development now or -- or slow development. In the absence of a national energy policy we have

to ask ourselves where does OCS production fit, and one of my problems in terms of their failure to deal with this question of a national energy plan is the fact that de facto a very important element in OCS production is if we proceed with the national program.

THE COURT: But that's true of all these political things. It's true of welfare. If you don't pass a new welfare law you go off on the old system. If you don't pass a full employment law you have a decision by inaction.

It was true of the $2 barrel tax the President put on imports. Congress didn't do anything so he took action. Whether it was right or wrong action, action was taken. If he didn't take that action it would be the equivalent of not putting a tax on.

But we are dealing with a decision-maker faced with a Congress, with all due respect, and public that hasn't wanted to face up and reach a concensus on these problems you are dealing with. But that's the way our political system operates, realistically.

And if you want everybody to wait until everybody agrees on what a national program should be, then you have also in effect made national policy, which is not to take steps immediately to increase production

of the continental shelf.

It doesn't seem to me your criticism really helps a person like the Secretary, who has to make a decision, unless --

THE WITNESS: Well --

THE COURT: (Continuing) -- the law requires that he wait until this national program be set, which may never take place. There may never be agreement.

How are you going to get people in Wyoming to vote for a program that kills their environment and helps the environment of the people from the South Bronx? Very difficult.

(continued next page)

A (Cont'g) More specifically, I have served as chairman of a subcommittee of the New Jersey County Planners Association on Coastal Zone Management.

I also served on a committee of the New Jersey Department of Environmental Protection, a task force committee of the Commissioner regarding coastal zone management.

Q Would you briefly outline Cape May County's economic and environmental assets?

A Cape May County is located -- I guess I should see the lease sale is located about fifty miles east of Cape May County, directly off the shores of Cape May County.

The county is shown on the exhibit submitted in the final Environmental Impact Statement. They do not show the county as I would view it as Cape May County planning director.

I prepared two maps which are the way I see Cape May County. And some of its problems could probably be described by a few comments on the maps.

Q All right. With the Court's permission, would you please identify the exhibits that you are referring to and explain the source of the information depicted thereon and describe the contents of the exhibits.

A Both maps are developed from data contained in the Cape May County comprehensive plan. And it has been

derived from soils data, from wetlands mapping done by the State of New Jersey and other various sources of data.

More specifically, the map with the area shown in red indicates soil with severe limitations to development in the county, and the map with the green and blue shows wetlands, title, and brackish in Cape May County.

Q Would you, before you proceed, indicate on the larger map behind you which would be Plaintiffs' Exhibit 26 in evidence or in Plaintiffs' Exhibit 27 in evidence, the portions thereon which are depicted in Plaintiffs' Exhibits 65 and 66.

A Cape May County is located on the southern tip of New Jersey, sort of an appendage. And as I indicated earlier, it is located fifty miles west of the proposed sale area.

Q Can you point to the portions of Cape May County that are shown as having soils with severe limitations to development or having wetlands as shown on Exhibit 66?

A Two places are somewhat similar. Certainly, the wetlands have soils with severe limitations. The maps showing soil with severe limitation are solely from a soil mapping, and on it it includes some highland areas which are developed. Yet, they are subject to flooding and do have limitations to development.

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The maps showing areas in green and blow show areas that have been mapped as wetlands by the State of New Jersey. And they also show areas designated as swamplands. In accordance with soil data, both brackish shown in blue and tidal which are shown in green.

Q I show you visual number one, which is one of the maps contained in the Final Environmental Sala 40, Volume 4, and ask you if you would comment on the adequacy of the treatment of Cape May County, and in particular those portions of Cape May County which you have identified as having wetlands or soil with severe limitations to development.

A This exhibit shows some of the areas in the county as having potential recreational and open space areas. They are not specifically shown as areas of wetlands or areas of marsh, or areas limited to development because of soil characteristics.

Q Can you briefly describe the basis of the economy of Cape May County?

A The economy of Cape May County is -- we estimate is to be 80 per cent dependent on tourism.

Now, there are a number of estimates that have been developed. We researched all tax records in the county, for example, to determine the amount of ratables in the county

that were directly related to the tourism economy, such as marinas, motels, restaurants, and estimated that 60 per cent of the ratables of the county are directly related to the tourism economy.

Q Do you have any dollar figures to quantify that 60 per cent figure?

A Well, several figures I think will suffice to quantify the county tourism economy: income from rents, rental incomes, which includes camp grounds, motels and seasonal units, which total $242 million in 1973. Tourist retail sales were estimated to be $122 million in 1973.

I don't have the figure immediately at hand as to the total number of ratables in the county. Nevertheless 60 to 90 per cent of the influent structure and 60 per cent of the building of Cape May County are related to the tourist economy.

I would add one other interesting -- two other interesting statistics which I think are important. The County's population in the wintertime is from 60 to 70 thousand people. It has been estimated by a number of studies that that population increases some tenfold during the summer, all due to the increase of tourism in the summer.

An additional statistic is that Cape May has more camp grounds than the entire state. It is estimated

that there are some 50 thousand people alone in camp grounds in Cape May County during the summer.

Q Please outline briefly Cape May County's involvement in the OCS issue.

A Cape May County has been involved from the outset, or what we understand to be the outset of the OCS issue. We reviewed and commented on -- in detail on the draft of environmental impact statements. We gave testimony at the hearings that were held at Atlantic City. Prior to that we also gave testimony on the programmatic statement for OCS. After the hearings in Atlantic City we met with the Bureau of Land Management Personnel. We met with oil industry representatives. We met with gas industry representatives. We met with our Congressional delegation from New Jersey regarding the issue.

We reviewed the Final Environmental Impact Statement in some detail. And we also reviewed the stipulations and OCS operating orders which just recently came out.

Q Please tell us the following information, Mr. Garmer: First, what concerns you raised and how those concerns were dealt with in the Final Environmental Statement for Sale 40, the lease stipulations and the operatingorders which you reviewed.

A I would request to refer to some notes that

Q Well, let's assume that you -- you outlined three or four areas of concern where you said that the environmental safeguards are not adequate.

If you got the responses that you desire on those particular issues would Cape May County still nonetheless be opposed to the sale?

A I don't believe they would be opposed to the sale. If the four areas of concern were properly addressed.

Q Isn't it true that one of the concerns which you expressed to BLM was the desire not to have any increased industrialization or urbanization of any kind in your county?

A I don't know if "In" is correct. We are concerned about the urbanization of Cape May County and how it impacts on the tourist and resort economy.

There are some industrial uses which would be welcomed and some development which would certainly be welcomed, but we are concerned with the urbanization and how it could be overwhelmed in certain cases if there were a major find and major industrial facilities were located there.

Q Were you involved in the preparation of the statement that was submitted to -- at the public hearings

held in January on the OCS--

A Yes.

Q -- sale number 40?

There was an original statement and then there was --

A A supplemental.

Q -- a supplemental statement; is that correct?

A That's correct.

Q I want to call your attention to the last page of the original statement, and referring to the last paragraph of that statement, and I will quote it to you, it's short:

"In our comments on the draft generic environmental impact statement on the accelerated OCS leasing program, we said that the Federal Government should not sell OCS lease sale areas and ignore the consequences. We stand by that statement. We will continue to resist to the fullest extent possible the attempt to industralize, urbanize and destroy the environment and resort economy through Federally authorized OCS activities.

"The Cape May County Planning Board therefore urges you to withhold OCS sale number 40."

Did you write that statement?

A Yes.

A Yes.

Q Could you describe the nature of the labor force that exists now in Cape May County?

A Well, the labor force increases to a large extent during the summer.

It's a seasonal economy with 90% of the economy geared to tourism, a majority of the labor force is geared to tourism. I don't have detailed statistics on employment.

Q Is there a migratory labor force that comes to the County in the summer?

A Yes, there is.

Q And then leaves again in the winter?

A Yes.

Q And would you consider it desirable if, to just hypothesize for a moment, a large petroleum refining plant was built in that County, would that help resolve some of the problems of seasonal unemployment in the County?

A Well, no, I don't think it would.

Q Would you be opposed to the development of such a large refining plant in your county?

A Yes.

Q On what grounds?

A Well, on the grounds that -- and I'm not speaking

I would like to call to the Court's attention that last week Mr. Bialik had mentioned that we had gotten a letter from the Interior Department regarding the items that were made available to Secretary Kleppe on Lease S[illegible] 40 in response to the Court's direction, and Mr. Bialik had pointed out that instead of being told what document the Secretary had relied on we were told what documents he was given, and I'd like to make it known to the Court that this highlighted our original request to be able to examine Secretary Kleppe.

The Clerk then took that under advisement last week, and I think that I should bring up again that issue now. In colloquy at various times the Court has expressed the fact that he was particularly looking at Lease Sale 40. This highlights the fact that our discovery ironically has been limited to either people here in New York or people in Washington who dealt with the programmitc, and not the Lease 40 decision.

I'd like to call up that once more to see if the Court would rule on that.

THE COURT: No, I'm very pleased that you did bring it to my attention.

We will commence tomorrow at ten o'clock.

actual decision, then it's a charade. It's the type of ticket punching that wastes so much time in the government.

What the PDOD should tell us is why the conservation optin is not being vigorously pursued. It's not because the cost of conservation is greater than the cost of producing from the outer continental shelf. That comparison is misleading and wrong.

Perhaps it's because of political feasibility, although there are a number of proposals in the area of conservation that states have adopted, individual states have adopted and that European countries have adopted, and politicians, I would argue, are finding that the politician who is bold on this matter and asks for sacrifices, admits that there is an energy problem and calls for the steps which the Europeans have taken a number of years ago in terms of the cost of gasoline and the accessibility of energy, are finding not that they are being turned out of offic e, but people are responding to this.

So in response to your point I would say your argument is a criticism of this PDOD. The PDOD does not tell us the basis for the secretary's decision. It does not tell us the evaluation process

that went on in the energy conservation option.

THE COURT: Well, supposing the PDOD had said "We haven't considered the massive conservation that would be required because this will necessitate new laws and action by Congress, and there is no way of predicting what Congress will do"? Would that have sufficed?

THE WITNESS: No, because I believe there are a number of conservation options. Again the Ford Energy Policy Project listed anumber that can be taken in the private sector with encouragement, moral suasion on the part of government, that can be taken by administrative action, that don't require action by Congress.

And then finally there are actions --

THE COURT: Well, administrative action is also political. That's the President.

THE WITNESS: Yes.

THE COURT: And the President doesn't feel that he ought to act in this area.

THE WITNESS: What I would have liked to have seen here is, again coming back to -- to your -- your point --

THE COURT: I'm not making a point, I'm just

raising a question.

THE WITNESS: Yes, the -- the fact that something is political doesn't mean that people can't debate it and discuss it rationally. The -- you can list and evaluate and shift the discussion of political feasibility from a shadowland of hunches and gut feelings to an explicit discussion of what the different options are, what the costs and consequences of each of the different options happen to be, and then what the factors are about each options that make it politically promising and politically feasible.

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THE WITNESS: (Continuing.) And then you can come up from this analysis with a conclusion that energy conservation, although theoretically it's an attractive option in the short term, is just politically infeasible because of the cost to different sectors of the economy and the lack of willingness on the part of these different groups who bear these costs.

Now, this serves two purposes. One, it advertises the true ground or reasons for making a decision and informs people about the -- what decision makers perceive as the important factors, important costs, and the result might be an educational process where people who would react strongly and adversely if a conservation message or proposal were suddenly imposed on them in finding that the energy problem is persisting because this option can't be implemented because, supposedly, their blocking it would react and respond by saying that if the following compromises are made we will shift from opposition to support. This also will serve the purpose of informing decision-makers.

I suspect, in my own dealings within the government, I found that the political argument is

decisions, to force the decision-maker to think carefully about these bases. And in the political area there is just nodiscussion in analysis at all.

An undergraduate in political science could do a better assessment of the political factors than exist in the PDOD.

Now, if I could, I'd like to return to this point on the comparison, although I would agree with you, possibly it is a moot point. It's clear that the Secretary of Interior didn't decide based on this comparison not to emphasize the energy conservation option. But for the sake of the record, let me show why that comparison is misleading.

Again, there is a large body of literature dealing with the future. How can the economy adjust to over a 20 or 30 year period to energy conservation, to a gradual constriction in the supply of energy.

Now, there are two views of the future. One view of the future holds that technology adjusts with long term. And that if you cut something as essential as fossil fuels, reduce the supplies of fossil fuels, there's going to be a dramatic foul-up in the standard of living of the typical American. Problems that right now seem important, groups that seem significant

the political problems that we have right now, these people argue in five or ten years are going to pale. When we consider the political problems of a shrinking pie and the resistance of different groups to the problem brought on by the transition from limited fossil fuels to much more expensive and probably infeasible alternative energy sources, these people argue that by postponing the hard decisions we are going to make the future even more politically difficult and even more untenable.

And this is where the future comes in. This is where the risks come in. There should have been some consideration in the PDOD of this worse case situation.

In accelerating the leasing of the outer continental shelf, are we making decisions right now with a probability of 10 percent or a probability of 5 percent that in 5, 10 or 15 years are going to prove to be disastrous.

That point is not surfaced in the PDOD. That whole body of literature is completely neglected. It isn't even discussed. And I think this is a shameful omission.

On the other hand, if you look at the more

optimistic, and I would say the more probable scenario, here is where you have to deal with the energy conservation long run ability to adjust to energy conservation options.

The Hudson-Jorgorson model, which Dr. Atkinson referred to or discussed last -- yesterday, is one of the most authoritative models in terms of its projection or prediction of the future. Now, there are problems with the model. But what that model shows is that over a 20 or 30 year period, the cost of energy conservation, the adjustment costs, average out and virtually disappear, and that a zero energy growth scenario by the year 2,000 would leave us with a gross national product capita income that is not significantly different from the gross national product that we would have if we continued along the present scenario of trying to develop an explicit -- the fossil fuel sources, that we have to keep significant gap levels from the level that the market demands and the level of supplies that are available domestically.

THE COURT: But even if you have a zero energy growth, you still have a substantial national deficit.

THE WITNESS: Yes.

becomes one of the timing of the release of oil from the outer continental shelf. When is the optimum period to lease it.

This is again something which can be the subject of rational debate. We can put our assumptions out on the table, analyze, given politically palatable conservation measures, the size of the deficit, and then examine the impacts of holding the oil back and leasing it later, or leasing it now. And this is another analysis that I don't see in the PDOD.

THE COURT: It's the ant and the grasshopper analysis.

THE WITNESS: And again I don't believe personally -- and Dennis Meadows thought it was because of my bias as an economist -- I don't believe the projection coming out of the Dartmouth Energy Model -- I think the economy is much more resilient and able to substitute. But I am concerned about it. I'm concerned that we will find outselves in the future regreting decisions that we make now, decisions that seem sound. And I would like to see someone who is representing me and making this decision at least consider this possibility that we are being spend-thrift, that we should postpone and lease at a later

date.

This raises another concern which I have. And this is the neglect of the organization of petroleum exporting countries. The assumption in this model analysis is that the -- that OPEC doesn't exist; that we can accelerate the leasing of oil or we can hold the oil -- hold back oil supplies and it will have no impact on future prices.

Now, that assumption is clearly wrong. There is a cartel. And in the cross-examination yesterday the argument was advanced that we need to accelerate the leasing of the outer continental shelf oil in order to break the cartel.

THE COURT: I don't think that was the argument. That wasn't the argument. As it developed, the point was that assuming OPEC would be willing to withstand a cut in its sales and maintain prices, you wouldn't have a break in price until your internal production was self-sufficient. That was the point that was made. Not that it wouldn't have an impact.

THE WITNESS: That strengthens the argument I am going to make. The argument that I am going to make is that the most realistic scenario shows that it's po litically and economically infeasible to be

completely self-sufficient. And this is recognized in most of the analysis.

The usual issue is not how, when do we get imports to a zero level, but when do we reduce imports to a politically acceptable level. When do we reduce the deficit to the point where 50 percent is our oil supply, our energy is not coming from overseas sources.

This is a concern which I have. I think many of our problems are due to a model of analysis that ignores the existence of cartels, a monopoly. An analysis which views oil from overseas as the oil of last resort. We are not going to use Arab oil unless we have no choice.

Now, unless the absence of the Arab oil will mean a major run-up in costs or major disruption of the security of our economy.

Now, I think this is a very dangerous approach.

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THE COURT: Well, it's true it's dangerous economically, but there again it's politically realistic.

THE WITNESS: It's dangerous politically, too, isn't it?

THE COURT: Well, that is a question for the President and the Congress and the Secretary of State and indirectly the people to decide on. But it's not purely an economic one. If it purely were an economic problem, clearly we would be better off importing as much as we could at the lowest possible price and let the market determine everything.

THE WITNESS: But wouldn't we be better off --

THE COURT: But we are dealing politically with a problem of being at the mercy of Arab states and indirectly of the Russians, I suppose. That is what is concerning many people.

THE WITNESS: But if we are going to be at the mercy -- that is, severe economic disruption of the Arab states, in the scenario -- both scenarios, a scenario that is being sold to us on the grounds of insecurity and the need for national security, that is a scenario of rapid development of the outer continental shelf and rapid production from the

remaining sources of oil that exist within the United States and within areas of the United States that we command. If that scenario leaves us still vulnerable to cuts in oil consumption of a couple of million barrels per day, which if -- which would cause a significant disruption of the economy --

THE COURT: I know. But you can live with that more readily if you have more oil coming in internally. Clearly, the -- if we get into a war situation or a blackmail situation, we can live with it easier if we had more internal resources. That seems obvious.

THE WITNESS: The scenario that I would like is a scenario in which we allow imports to increase, as long as the imports are replaceable in the short run from oil stores, and in the long run from policies like the accelerated leasing of the outer continental shelf.

THE COURT: But what you are suggesting is that we develop the outer continental shelf and hold it in reserve.

Well, tying up that amount of capital from private firms is really not a practicable alternative, is it?

THE WITNESS: If you do as need suggests that is

actually drill the well and have them in place --

THE COURT: Drill the well, put up the platforms, put up the delivery system, you are dealing with investments of tens of millions of dollars. Who's going to put up the money?

THE WITNESS: That is clearly unfeasible. If you do as I have suggested in the CEQ hearings, and that I am suggesting here, that is, you explore the outer continental shelf. You develop standby production plans. You do not actually drill the wells and shut in the oil. You have oil storage and vigorous conservation plans that will tide you over for a two- or three-year period while the wells are being drilled, while the outer continental shelf is being developed. Then you're talking about a different situation where the cost comparisons are different.

What you are shooting for is a price-sensitive, and embargo-insensitive demand for Arab oil. A situation where an embargo and a price increase cost the Arabs something. They lose half their market in the United States, or even more of their market. Why? Because the price increase in the embargo brings onto the market over a three- or four-year period oil

THE COURT: (Continuing) -- responsive.

THE WITNESS: (Continuing) -- was that given consumption of 18 million barrels per day and imports of 6 million barrels per day, we -- and diversion to -- to Europe and Japan, we expected 2 million -- a reduction of some two to two and a half million barrels per day in oil supplies in a really severe embargo.

But as I say, those figures were estimates prepared awhile ago, two years ago - and the figures probably need to be updated.

Q Am I correct, though, that we are importing now from Arab OPEC one million out of the total of 18 million of consumption?

A That's -- that's my understanding.

MR. BIALIK: Thank you.

THE COURT: Any cross-examination?

CROSS-EXAMINATION

BY MR. JENSEN:

Q Now, Mr. Newlon, I didn't catch where you said you were currently employed?

A I work for the National Science Foundation.

Q And is that a governmental agency?

A Yes, it's an independent governmental agency.

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Q Did the Secretary prepare such a written decision as to why he decided to accelrate OSC leasing or to proceed with sale number 40, to your knowledge?

A I had presumed that the PDOD -- I think we are coming in circles again -- that the programmatic PDOD and the PDOD for site 40 was such a description of the justification of the decision-making process. Perhaps I'm wrong, perhaps it's something else. I'm not a lawyer, I'm just commenting on what the programmatic PDOD doesn't do.

It doesn't provide analytical basis for accelerating the outer continental shelf, and it really obscures the issues that -- other issues that seemed to surface in our discussion about why the Secretary would consider or wouldn't consider a certain option.

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significant or important, the 20 year period to the turn of the century, and I was arguing that if we can say to the Arabs, you increase your price or your -- you embargo us, you lose for 20 years 2 to 3-million barrels a day of sales to the United States market. That that would be a substantial oil weapon, to use the term that wasused yesterday. And thatwas the basis of my national security argument for exploring, but not using -- not producing from the outer continental shelf.

The fact that your -- the figures that you're citing seem to support that argument. They don't contradict it.

Q So the nature of your testimony is that the PDOD is inadequate because it fails to consider certain social and economic alternatives to sale number 40 or OCS accelerating --

A There are two points that I made. One point, that there were a series of analytical defects in the programmatic PDOD that I cited. And most of my testimony dealt with -- and Dr. Atkinson cited yesterday -- and the other part is that -- and this is how I became involved in this in the first place, that I felt there was a major option with significant advantages that I had written about, that I talked about, and that because it was imaginative, perhaps, it wasn't being addressed or considered seriously.

year 2000.

A I wouldn't make that assumption. As I explained before, especially over 20 or a 30 year period, the -- there are enough close substitutes for that natural gas that -- if the prices were allowed to rise to an appropriate level, which I don't think would be -- would be economically --

Q Doctor, we are talking now about 1979, 1980, 1981.

A Yes.

Q Assuming those -- you cannot assume that the price increase will not bring additional supplies?

A Wait a minute. As I informed -- as I told you earlier, even if the -- even if the price increase didn't bring additional supplies, it would bring a reduction in demand that would bring demand in balance with supplies. And what I am telling you is I don't think that would constitute a crisis of the -- of the dimensions which Dennis Meadows talked about. There are close -- relatively close substitutes for natural gas. There are not --

Q Excuse me. I will let you go on with that. But what does a home owner who is cooking with natural gas substitute for it?

A There are ways of converting his utensils or

offset the benefits of the subsidiary which natural gas users have received for a number of years.

Q And the elimination of the subsidiary to which, I take it, you object, is a political question, is it not?

A Sure.

Q Because of regulations by federal agencies of the pricing of natural gas?

A No. The natural gas situation is a case of a crisis that -- where the policies to produce -- that's where the crisis are blamed. It's the price regulations that have to be changed. And the crisis -- if you can use that term -- has reached such significant dimensions because we keep putting off doing something. And to that extent, bringing in large amounts of natural gas on the market from the outer continental shelf would be an example of what I was talking about, where the government doesn't behave like the private businessman. A good private businessman would realize that 10, 15 years from now, 20 years from now, that natural gas might be a lot more valuable than it is right now. He would withhold supplies from the market, which the government through its leasing policy, and to avoid a crisis, is going to force on the market. To the extent that not leasing the outer continental shelf will force us to have a rational pricing

reliance on foreign energy sources.

A I wouldn't go quite that far. What I am saying is that in terms of considering alternatives which the programmatic PDOD asserts that it was doing, it in fact ignored the dynamic considerations.

For example, will accelerated leasing of the OCS in fact render us more vulnerable, let's say, in 1990 or 1995.

Now, I think that the testimony that I referred to of Dr. Gaskin's before the ad hoc -- the House ad hoc committee on the outer continental shelf tended to support what I am saying, that this is an alternative that should be considered and it wasn't.

Q Well -- but does the PDOD, either one of them, purport to consider that?

A No, they do not.

Q The analysis is strictly in terms of what?

A Extremely static.

Q Of what it is now -- what the situation is now? And so that when the PDOD concluded that OCS oil would reduce total energy costs and reduce U.S. reliance on foreign imports, it's speaking of the present -- or at least the short term present?

A Yes. But it really doesn't make sense, because

what they are doing is comparing OCS production that is coming on stream in 1980 in some instances, and 1985 in others, and the peak production for sale 40 in 1989 with current relationships. And that's not a fair comparison unless you attempt to analyze what those relations will be 10 to 15, 20 years from now.

Q But isn't it your concern that there is not a discussion of the fact that the oil reserves are going to be depleted and then we might find ourselves very, very dependent upon foreign sources of oil?

A I think that that is a consideration. A very real consideration.

Q Isn't that --

A That Dr. Newlon --

MR. LIKE: Excuse me. Could the witness again have an opportunity to state his answer fully without being interrupted by counsel.

THE COURT: Yes. He's doing very well.

Go ahead.

Q Isn't that a self-evident proposition to any reasonable decision-maker that if we use the oil now, it's going to be gone and there won't be any more, and that's a problem?

A I am not certain that -- that that is self-

BY MR. JENSEN:

Q Now, I believe your affidavit or your testimony says that you think that development of OCS oil now is not an energy alternative that should have a very high priority? In fact, it should have a very low priority, as far as the national energy policy.

A Not the development of OCS in general. I think if you read my testimony closely, there are probably 50 pages dealing with the Gulf of Mexico.

What I am saying essentially is that by holding OCS sale number 40 this month, what we are in fact going to do is exacerbate the problem. The problem is that the development in the Gulf of Mexico isn't takingplace at the optimum level. And I can't really foresee during the next three or four years that development being anywhere near completed. You've got a lot of new leases out there which are of -- which recently have been acquired, and discoveries are being announced nearly daily or at least, you know, every two or three weeks, real significant discoveries. And to give you an example, there are three tracks maybe ten miles off the tip of Louisianna which were acquired in May of 1974 at a cost of $214-million. They are in -- I believe it's nearly a thousand feet of water. One drilling platform is going to cost a hundred million dollars. That

drilling platform has been ordered. Plans are in. They are currently planning to order perhaps a second platform. For all indications it may be the Gulf of Mexico's largest oil and gas field. There will be adjacent unlease acreage which ultimately will be leased through additional developmental drilling in all probability. And the lease figures that I've got in my testimony -- I believe it is somewhere in the neighborhood of 1,700 active leases in the Gulf which will increase, placing more of a demand on drilling equipment, platforms, rigs, manpower.

By holding lease sale 40 this month, I believe the PDOD estimates that bonuses will be 400 to $600-million. And there are various estimates of drilling costs and new transportation facilities, gas processing plants, and there's going to be a rather large drain on the industry's ability to raise capital for all those ventures alone, not to mention what is now there in the Gulf of Mexico. And that can be brought on stream at higher levels at much sooner rates.

THE COURT: Do you mean it's better to take off that 4 to $600-million and invest it in physical exploration and production.

THE WITNESS: That's my opinion, your Honor. Yes.

What we are talking about essentially is this,

it would cost $5 million to increase production up to MER. But at any rate, one of the qualifications that they have here is "Any increase in MPR per well in the future due to tapping of new major reserves cannot be foreseen." In other words, additional drilling activities often proves up new reserves. I would not discount that possibility, either.

Q Surely. Now, how would you compare the possibility of discovery of new reserves by the additional drilling in the Gulf of Mexico which you suggest compared to the possibility of discovering new reserves in unexplored frontier areas such as the Gulf of Alaska or the Atlantic regions?

A Are you asking me --

Q Isn't it true --

A (Continuing) -- to quantify?

Q Yes, if you can.

A Well, the success ratio in existing fields is oftentimes -- in the Gulf of Mexico it's between 60 and 75 per cent, depending where you are. Sometimes as high as 80 or 90 per cent. So in terms of risk there is probably a great possibility of finding something with every development well in a known field that you drill.

additional exploratory and developmental drilling in the Gulf of Mexico will not prove up larger reserves than we can reasonably expect from OCS Sale 40. In fact, I'd be fairly surprised that -- for example, there are nine hundred and some leases not classified producing, not classified producible shut-in, many of which haven't been drilled yet, and they would I am fairly confident develop a lot more reserves than those that are being projected for sale 40.

Q Well, do you have any information that industry has used the Gulf of Mexico as a source of very significant finds of oil and gas, additional reserves, new reserves, in the same way they have used the possibilities of such in the Atlantic and Gulf of Alaska regions? Do you have any information about that?

A Yes, I'm aware, for example, of some of the predictions for deeper water -- water areas in the Gulf of Mexico. They are quite optimistic in terms of major new fields. That Cognac prospect I was referring to earlier may be the Gulf's largest oil and gas field. It's a highly prolific producing area.

Q Let me ask you to look at something with me. This is Defendant's G, Exhibit G, already in evidence. And I'd ask you to look at page 2 under the -- well, I don't

that you have got a crisis because you've got curtailments, because you've got a large number of substitute fuels.

So I really wouldn't -- I don't think I would agree that it's of crisis proportions, no.

And in fact relative to the future, inasmuch as the FPC just recently increased the price of new gas, I would anticipate a lot of that gas that's being either withheld on-shore or offshore or being sold under short-term contracts in intrastate markets would be freed up for the interstate pipelines.

Q So even though you don't consider it to be a crisis you do consider there is a shortage, and my next question is whether in your opinion that shortage can be relieved by your suggestions for increasing production in the offshore Gulf of Mexico OCS area?

A No, the shortage --

Q Excuse me, I want to be sure you --

A (Continuing) -- can't be relieved in terms of --

Q I want to be sure you understand my question.

A Yes?

Q I'm talking about -- I want to make it clear -- the increased producing of the wells and the drilling of additional wells.

A There would be significant increases in

It depends on whether or not they are burning No. 2 or No. 6. [illegible] Commission authority to control [illegible] tra-

THE COURT: Assuming it's $2, what does that mean in terms of gas?

THE WITNESS: Approximately $2 per m.c.f.

THE COURT: And what are they charging now on interstate lines under the new raise in prices?

THE WITNESS: Exclusive of taxes, if upheld by the courts, I think the new nationwide rate is approximately $1.49 per--

THE COURT: So it still wouldn't be high enough to induce these local power companies not to use it?

THE WITNESS: Well, the local power companies in many instances, your Honor, are purchasing that natural gas under long-term contracts--

THE COURT: I see.

THE WITNESS: --which are significantly below that level.

THE COURT: I see.

THE WITNESS: They wouldn't be burning gas in Texas and Louisiana if they were paying as much for their gas as they would have to pay for oil. That's why you have got the shortage, because gas is so cheap.

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MR. BIALIK: Your Honor, we offer in evidence, in lieu of a statement of what the Secretary actually relied on in deciding the whole sale 40, a copy of a letter from Lawrence Hosey , the attorney for the Division of Energy and Resources of the Department of Interior to Mr. Hyman. This is a letter that Mr.Hyman produced and it lists documents that were allegedly available for the Secretary when he made the decision.

MR. HYMAN: I object again, your Honor. I am not going to -- it covers materials that --

THE COURT: May I see it.

MR. HYMAN: -- that we are -- we are now going far afield. They start from the top and they are going to the next level and the next level right down to the guy who delivers the mail concerning this statement.

THE COURT: Well --

MR. HYMAN: Why is it relevant.

THE COURT: It is my understanding that the - with the impact statement, that there were a package of other documents that went to the Secretary to assist him in his decision making.

MR. BIALIK: Your Honor,this document relates to Sale 40. The other document relates to the

of the curriculum vitae and a list of publications.

I have other copies if anybody needs them.

Q Doctor Oppenheimer, have you been involved in research in the area of the effects on the marine environment of hydrocarbon pollution in coastal and ocean waters on the outer continental shelf?

A Yes, my first research on hydrocarbons or hydrocarbon ecology was in 1951, as a part of API Project 51, which looked at source beds of petroleum in the Gulf of Mexico.

Q Speak a little louder, Doctor, so that --

A Yes. Which looked at source beds of petroleum in the -- in the Gulf of Mexico, the Texas area and the Louisianna delta.

After that I worked as an engineer with a petroleum company, the Central Land Oil & Gas, which has been changed, is a subsidiary of Standard Oil of Indiana. My primary role there was to work on the origin of hydrocarbons through microbial processes.

Since that time I have worked in the field of general petroleum ecology, advising students on microbial processes in the evolution and digenesis of oil.

I have worked about five years on the use of microorganisms to clean up oil pollution for the EPA.

not, probably because I'm so familiar with the literature, but there was not a good statement on the distribution of ambients or indigenous hydrocarbons in the area either in the water or the sediment.

There was a good description of the effects of these -- that they might occur, but for some reason this was not included in it.

Q Were there other errors or omissions that you might have noticed as you went through the statement?

A Not that weren't represented by the -- by the total package. No, if you looked at any specific item or any specific paragraph and take it out of context it would be very easy to be misread, but if you read the document as a whole you will find that -- that within the document there are the facts and the figures which will allow one to make decisions.

Like for example there was mentioned many times about the circulation and about drilling cuttings, about the produced water, et cetera. But also in that same -- in the same document it includes current measurements for the adjacent area.

Now, one can easily sit down -- and it took me almost three minutes to take the two values and put them together, and we came out with a figure of a minimum of two

miles of water passing each platform or each activity per day, and a maximum of ten miles of water.

Now, this is me is significant to evaluate the turbidity effects, the heavy metal distribution, the thirty to forty parts per million of oil in the produced oil, and the anoxic produced water, because when you realize that if you take the value of the area and its volume and the volume of oil that is produced in one day at a maximum value, which I think was about 320 to 340 barrels a day according to this figure, that this represents one-millionth -- the oil represents one-millionth of just the volume in the area of the lease.

So when you add all of these facts together it indicates that the impact of -- of the byproducts of exploration and production are going to be spread out pretty thin, because it's a very big ocean, and I only relate it to those areas directly in front of the platforms.

Now, this wasn't explicitly mentioned in the report, but it's there and can be evaluated.

(continued next page)

Q Incidentally, Doctor --

THE COURT: Excuse me. I have a question.

Doctor, you spoke about the ambient hydrocarbons. Now, by ambient hydrocarbons, do you mean those hydrocarbons naturally in the water because of effusions from the sea bottom, or does it also include manmade hydrocarbons such as -- I shouldn't say made but dropped, such as those pumped from tankers and the like?

THE WITNESS: By ambient hydrocarbons, I meant those hydrocarbons that have been measured in the last three or four years as the -- you know, in the waters of the Atlantic, the Gulf of Mexico and the North Sea, and so on.

The values there are between about 20 and 60 parts per billion, which we believe is about the lower level of microbial activity.

You see, hydrocarbons are produced. About 8 times 10 to the 6th barrels are produced each year by photosynthesis alone in the total world ocean, and about 15 per cent of the world's productivity is along the coast.

At the same time, if you use the Academy of Science's figures, a little over a million -- I think

general area of the bight. What's the ambient hydrocarbon level of that?

THE WITNESS: I don't know. I have not seen any --

THE COURT: Shouldn't it have been in this document, and would it have been affected or might it be affected by the additions of hydrocarbons that might come from the oil lease area and from pipelines or tankers carrying oil?

THE WITNESS: I have stated that this is one of the weak points of the -- the weak point that I found in the impact statement is that there is no evidence, no data on ambient hydrocarbons.

THE COURT: Well, could that be a significant factor in view of the fact that we have at least in this area and probably in some of these other areas the possibility of higher than this 20 to 60 per billion you have mentioned?

THE WITNESS: Yes. It's quite obvious that -- that those organisms that are living in there are subjected to a higher hydrocarbon composition -- you know, composition in the water, and have either adapted to it or have -- have decreased in numbers.

Now again, we can use a comparison here,

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THE WITNESS: Well, in the --

THE COURT: -- is important or it isn't important?

THE WITNESS: Integrating that with the production of oil, I would say that if the animals are already -- are already impacted with hydrocarbons then their opportunity for withstanding any -- any additional hydrocarbons from the coast is probably pretty good, because again you have a finite of material that will go in the water. Now, this excludes the physical aspect. I'm only talking about the water face. I'm not talking about a big blob of oil that may come in and bury all of the -- all of the shoreline and thus make it anoxic, because oil in a sense is physically toxic. If you were dumped in a barrel of oil head first I don't think you would last very long, and neither will any other organism if he is physically impacted with the hydrocarbons, so that he can no longer carry on life functions.

THE COURT: Go ahead.

Q Doctor, incidentally, are there studies that have been made as to the hydrocarbon content of waters nearby platforms producing in the Gulf of Mexico?

A Yes.

purpose of conducting inter-disciplinary research within universities.

Now we are becoming more and more aware that we cannot approach in an environmental evaluation without a complete inter-disciplinary coverage. This group, the Gulf Universities Research Corporation (sic) with a committee which consisted of myself and three other scientists, developed the offshore oil ecology program, solicited from the universities participants, selected 24 scientists representing individuals parts of the environment, physics, chemistry, geology, and so on, managed the project and -- and wrote up a simple conclusion such as I can give you here (indicating), and also have an on-going project to put the information in a computer for more complete evaluation, which is on-going at the present.

The -- I also took part in the project in that aspect of determining hydrocarbon composition of the water and in living organisms, and also microbial degredation rates.

The results of this are indicated in the first of these volumes, which I'd be pleased to give the Court. It indicated that about 70 percent had either no adverse or beneficial effects of all the projects that were completed, and as I said, they included all of the things like trace

elements and so on. And about 25 percent required further interpretation because they were just too complex within the time scale and the funds that were available to do a complete evaluation.

In this page is a list of all of the scientists and the fields which they represented.

Now, this was a study which was supported by the oil company, $1.5-million, of which the money was given to GURC and given to the universities. They did not oversee our research, they did not interfere with our selection of scientists, they did not interfere with our written description of the results. It was I guess probably one of the best research projects I've ever been on because it was money that would allow us as scientists to do as we thought best, without any outside impact.

Q There was an understanding that the work and the conclusions would be made public, is that right?

A The work and the conclusions have been and are to be made public.

Q Doctor, was a conclusion reached with respect to whether low level chronic exposure to crude oil would have a more than negligible effect on marine life, and if so, what was the conclusion?

A The conclusions based on fisheries evaluation

Q (Continuing) -- in the sale 40 impact statement?

A Yes. For example, Moore went to great lengths in saying there was no methodology in the impact statement. I felt that there was a considerable methodology. I thought it was straightforward, that he evaluated each part as a separate entity.

The data were there for allowing you to -- to compare units.

Now, if they had gone on for all of the comparisons, as I said, then they would have just added more and more and more, and it would be better because of the tremendous -- tremendous scope of interrelationships to present the data and let the evaluation follow with respect to each individual's interest.

Q Doctor, do you have any reason to believe that so far as your area of scientific interests are concerned, the environmental risk that would be involved in the leasing of the Mid-Atlantic region would be greater than the risks that were involved in the leasing of the frontier area offshore in Mississippi, Louisiana and Florida?

A Well, there are differences. The physical environment is different, the water is deeper, the wave action is a little bit more significant than perhaps the

Q Okay. Well, were you invited to come to testify?

A Yes.

Q You yourself?

A Yes.

Q By whom?

A By the attorneys of Liskow & Lewis.

Q And do you know on whose behalf -- I don't mean here today. I am sorry. I am talking back there on that Louisianna sale?

A Yes.

Q Your answer is you were invited by this Liskow & Lewis firm for that?

A Right. I don't know the exact organization for which they were working for at that time. I am sorry. I have been --

Q Well, did you have any idea of what sort of organizationthey were working for? Were they working for the oil industries one way or another?

A I assumed that they were working for the offshore oil companies, yes.

Q All right.

A But I don't know for a fact. Perhaps --

Q Was it in that connection that you reviewed

A Yes.

Q All right. Now, you mentioned testifying on another sale; is that correct?

A Yes. I testified at the -- not the sale, but at the impact statement -- or I gues s it was called that -- for the Malfa area which was held in Tallahassee for the same group of people.

Q Same group fo people?

A Under the same conditions.

Q And that's back in '73?

A I don't know the exact date. About that time.

Q Now, in direct testimony you spoke -- did you not refer to nature's valued judgment?

A Yes.

Q In passing?

A Yes.

Q Now, when you testified back there on the Malfa sale, didn't you say that you were willing to accept short term massive spill damage if the recourse would be to curtail the mining of oil, as you put it, or the mining of a needed energy material? Was that your valued judgment?

A Yes.

Q Let's talk a little bit about the offshore ecology investigation, the GURC study that you mentioned on

scientific aspect because of various reasons, among which are in there.

Q Well, Dr. Oppenheimer, the reasons that we went over this before in which you refreshed your recollection about -- by looking at it, that it didn't refer to it as whether it was scient fically inaccurate because they refer to insufficiencies of data and so on; is that not correct?

A That's what we consider the reason. An insufficient data may be because the guy took it wrong or there wasn't enough data. It's a very loose -- you might say loose character. One does not -- in the scientific field, one does not overtly go out and condemn a piece of research because it does not represent his best work. You may have a student who was lax and, therefore, we were very careful in our wording so we would not jeopardize the person's reputation.

Q All right.

A We do have a code of ethics just like you do.

Q Let's take a look at some of the inconclusive materials. You, of course, are familiar with the work of Mr. Perry, Alison Perry. I referred to this, I think, a moment ago.

A Yes. Not thoroughly. It's been quite some

time that I have reviewed his paper and I have reviewed many things since then.

Q To be sure. But you are one of the four people whose name is on this study.

A All that I am accounted for in the report -- because I do not have the report in front of me and I do not memorize all of the details of it and --

Q Well, let me see what you do remember, sir. Is it not a fact that Mr. Perry found that the production platform sites in the bay and offshore were both lower in miomass values than the two other sites and this was most evident offshore? Moreover, that this lack of numbers of bottom fishes was strongly to be influenced by the lack of bottom-dwelling burrowing type of invertebrae which these fishes feed upon? And did he not further find that the bottom was apparently sufficiently compacted so as to exclude soft mud living animals? And this was the result of drilling large amounts of drilling muds.

And finally, did he not note that in leased tracts with heavy drilling pressure, such a situation could become detrimental to the welfare of a considerable amount of, a viable amount of bottom land for a considerable time?

A As I mentioned to you, we try to evaluate all of these in context to the others. That's why we handed in

a disciplinary program.

Q May I ask you whether you are -- first of all, are aware if you did come to that conclusion?

A Yes. I remember vaguely the details. I am trying to show you where we were subject to the -- when we got the information from the geological survey, we found out that there was a discontinuity in the sediment type at the location and, therefore, there would be a change in the flora because there is a relationship between tissue environment and the type of sediment control factors. It so happens that at that spot that we collected, there happen to be a discontinuity with respect to the sedimentology. So, therefore, we could really come to no conclusion on that which would -- except for that fact. And this now is taking the several reports and putting them together. He did not do any geological work. He just went down and did a survey of the organisms.

(continued next page)

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BY MR. ZEDROSSER:

Q Did you find discontinuity of sedimentation in some of the areas that were the subject of the report which you claim is part of the 75 percent showing no harm?

A Unfortunately, the two areas that we selected were at a spot where we did not get constant continuity, yes. This we found out after the fact. Because it's obvious if we had our survey first we would have already been into the research project. This is one of those happenstance that you get into in scientific research. On that portion --

Q But the discontinuity in sedimentation didn't effect your ability to accept the results of the other investigation?

A In this case we decided to make no interpretation because the group which -- the advisory group which represented the geologist, two biologists and an ecologist decided that the data could be interpreted in several different ways, and, therefore, they elected to put it in that classification with insufficient information to make a judgment at that time.

Q Let me ask you the question once more. Is it not a fact that this same sedimentology condition was equally present in the case of the other investigations which you did not see fit to question and in which ended up in that

71 or 75 percent category.

A But the bottom geology merely effected the indigenous organisms that were associated with the bottom. And we felt because of the current structure, which is fairly rapid in that area -- it is up to 2 knots -- that the relationship between the bottom and the water was not one which was subject to the other. Therefore, we felt that from the geological and geochemical standpoints that the bottom sediments probably have had very little effect upon the areas upward around the oil platform.

Q Well, do benthic animals live on t hebottom? Benthic organisms?

A Yes.

Q And they were the subject of Report No. 3; isn't that right?

A But there is a difference.

Q Please answer my question.

MR. LAFITTE: Your Honor, I think he ought to be permitted to explain.

MR. ZEDROSSER: He will do that.

THE COURT: He will answer first and then give an explanation.

You may answer.

THE WITNESS: Okay. The bottom organisms are

classified into two: Those that live on thebottom and those that live in the water. There are two separate aspects, because the ones that live in the bottom, except for the crabs, and so on, are usually territorially or situated in places they can't move, whereas the bottom dwelling organisms, like the fish and so on, are free to move around. So, therefore, as I said, the current structure was such that the bottom sediments probably had very little significance from a chemical standpoint, although it may have had a significance with respect to the territorial -- the territorial aspects of the behavior of the organism.

Q Nevertheless, you accept Report No. 3, right? That one wasn't deemed inconclusive?

A That's right. Between the group of us, we found that we could make a value judgment from all of the information.

Q Now, the same Alison Perry also found, did he not, that it was a matter of concern for commercial fishermen -- and one of which hesays they have rightly complained about, that there is bottom obstruction in oil production areas.

A I think I mentioned that earlier in the testimony.

Q All right. But this is the same Mr. Perry whose

report only comes out as being inconclusive; is that right? He did say this, did he not?

A Yes. I guess so if you say so. Because I don't remember.

Q Well, let's not leave any uncertainty. Take a look at that and see if that refreshes your recollection. The bottom of the page I think it is.

A Yes.

Q And he also cautioned, did he not, against impeding the operation of the commercial fishing industry by such practices as not properly cutting off protruding pipes, not properly burying pipelines and pipeline junctions, and dumping scrap metal overboard from supply boats instead of off-loading it at the proper place on shore? He did say that, didn't he?

A If it's in the papers, then --

Q Well then, will you look --

A That's all right.

Q I don't want you to say something that isn't true. If you will check it.

That is right, isn't it?

A Yes, that's what it says.

Q Okay. Now, getting back again to the report of the GURC study, the study indicates, does it not, in figure 1,

that the results of the study number 7 showno adverse effect; is that correct?

A Right.

Q Now, study number 7 or report number 7 was by Dr. Kritzler, and he dealt with polychaetes; is that right?

A Right.

Q Now, Dr. Kritzler did a study, did he not, on oil production and polychaetous annelids in a Louisianna estuary?

A I think that was the title.

Q Didn't he conclude in that report that the conclusion that long term oil production and drilling in Timbalier Bay, Louisianna, has not exerted demonstrable stress on the polychaetes taxocenosis, and is dependent on the controls that we used being good ones? Did he so conclude?

A I don't recall.

Q All right.

A I will take your word for it if you're reading the -

Q No. Please take a look.

Is that so?

A Yes.

Q All right. Did he not also say that it turned out the controls were inappropriate if they were any good at

all for the studies which they were selected for? Did he conclude that as well? Is that correct?

A Yes.

Q And finally, didn't Dr. Kritzler end up by saying that the whole question on the study was moot and would remain so until the rest of the samples taken in the study were worked up and analyzed? The rest of the analytical scheme planned for the study had been completed and a parallel study was conducted in a bay of similar origin and characteristics, but not yet exploited by the oil industry? Is that not what he said?

A Yes. Are you finished with Kritzler's papers?

Q I am, yes.

A May I make a comment?

Q No, you may not make a comment. I am sure --

MR. LAFITTE: Your Honor, I ask that the witness be allowed to respond.

THE COURT: Yes.

THE WITNESS: Again, it was the committee's responsibility who evaluated all of these things to obtain a valued judgment. We compared the actual work and discussed the work with Kritzler. It is quite appropriate that on a scientific -- from a scientific standpoint that his statements were quite valid. But

what was not brought out in the text -- and the reason that we put it in in the positive or the category that we did, was that the polychaete concentration was analogous to other similar areas in the Gulf Coast as far as number diversity and biomass. Therefore, if one could conclude from this -- it would be very difficult if proper controls were attained to determine whether you might get better or less effects. However, with the comparisons between all of the other information that we had, it was quite obvious that the biomass and the species diversity of these were indeed in a productive mode which indicated that there was no adverse effects that could be related to the location of the organisms.

Q But this report, GURC's report that you referred to on direct, says that Dr. Kritzler's report indicates no adverse effects? Now, whatever the council might have concluded, is it not true that Dr. Kritzler's report didn't say there was no adverse effects?

A That's true.

Q All right.

A As I said, it was our interpretation of his working in context with the other information that led to our conclusion. This was the whole purpose of the research

base line data was limited your ability to determine the extent to which oil activities affected the relative quantities of the different organisms in a given area was also limited; isn't that so?

A Well, I -- I don't know whether this statement came out that we didn't have sufficient comparative data -- came from -- because we did.

Q You indicated that the pre-'52 data was somewhat limited.

A But we did our work in '64. That's ten years.

Q Well, you pointed out some time ago, in fact on several occasions, didn't you, that there have been oil and gas activities in the Gulf for a long time; right?

A Perhaps --

Q Well, is that right?

A The --

Q It's not a very hard question to answer, Doctor.

A I answered that, but I would like to qualify it by saying there is a finite room --

Q How would you answer it beforeyou qualify it, sir?

A Excuse me?

Q How would you answer it before you qualify it?

A That there was a small amount of data A 733 available before 1952.

Q And that oil and gas activities --

A And since -

Q -- went on for a long time prior, didn't they?

A Oil and gas activities went on for a long time. However we related our information to the capacity of a -- of a system to produce, and there are certain analogies that you could draw from this. You are sitting in a spot in this room, you cannot be replaced and still stay in the same spot. This is a simple law of physics, that two objects cannot occupy the same space.

A field can produce only so much wheat. There can be only so much capture of energy per unit area. And what I'm saying is that the productivity in our area is synonymous with a healthy environment, as evidenced by the biomass yield.

Now, I told you that in previous testimony, that our bays are extremely productive. In Galvaston Bay we produce 250 pounds of fish per acre per year as a harvestable yield. In Corpus Christi it's 150 pounds per year, the difference being that more nitrogen and phosphorous is supplied in the areas around Houston than they are in our areas. This is close to the maximum productivity per unit area of the aquatic environment.

You can't produce any more. Now, isn't that evidence that the environment is healthy, or would you like to say that we can produce more fish than the water could hold?

Q Dr. Oppenheimer, I didn't ask you whether the environment was healthy, what I ask you was -- and I'd still like an answer to it --

A Okay.

Q -- if you can give me one, whether it isn't true that in determining the relative quantities, relative quantities of different organisms in an area both before and after the onset of oil and gas operations, your ability to come to a conclusion is diminished by the lack of base line data? Now, isn't that pretty easy to answer, sir?

A I've already answered that yes three times.

(Continued next page.)

in the range of 81 to 5400 micrograms per gram, is that correct?

A Yes. That's parts per billion. Do you know how much a part per billion is?

Q I'm not answering questions, but if you want to say what a part per billion is.

A I mean it's very difficult to relate the scientific facts unless I know that you are comprehending them. Do you know how much a part per billion is? One dollar in a billion dollars, doesthat help you relate? Do you know how high a stack of a billion dollars is? We are talking about these concentrations, and in thewater we are in parts per billion.

Q Okay.

A When we talkabout differences in parts per billion we are talking in differences between one or two or three dollars per billion dollars. Pretty insignificant from from an ecological standpoint.

Q All right, let's talk about that a little bit. Are you familiar with a publication called "Petroleum and the Marine Environment" by the National Academy of Sciences? I'm sure you've heard of that, haven't you?

A Yes.

Q Are you aware that some of the values they

found for particular kinds of organisms fell in the following ranges or numbers? I appreciate there is a difference between dry and wet numbers, apparently?

A Yes.

Q So I am sure you will remind me if I slip up on that, for a particular kind of algae there was 40 dry, for a particular kind of mussel, mytilus, 36 dry, for another kind of mytilus, 10 dry, another mytilus, 9 dry.

A Are these parts per billion?

Q Pardon me?

A Parts per billion?

Q Yes. All right, now, my point here is a very simple one: Those numbers of course are considerably lower than the lowest part of your range -- right? It was 81?

MR. HYMAN: Your Honor, there is an objection. I would like the witness to look at the table to verify that it's parts per billion, because when the witness asked "parts per billion?" the lawyer said, "yes," and he was looking at his yellow sheet of paper, and I don't know what figures he was talking about, so can we have that verified.

MR. ZEDROSSER: Please, of course.

THE WITNESS: It's parts per million.

Q Parts per million?

A Yes. That's why I asked the question. Most of the concentrations in living organisms are related in parts per million rather than parts per billion. Now, do you know how much hydrocarbon is in the cuticle of an apple?

Q Well, now, wait a minute here, let's look at your GURC report. Tell me, sir, what that says. Is that milligrams per gram?

A No, it's micrograms per gram.

Q Micrograms per gram?

A Yes.

Q And what's this?

A That's in micrograms per gram.

Q So we are talking about the same thing, are we?

A Yes

Q Oh, thank you.

A That's parts per million.

Q Well then wait a minute. Then on the GURC report it wasn't parts per billion, was it, it was parts per million?

A On the living organisms, yes.

Q So now we are starting to lecture about one in a million, when it was one in a billion? Weren't you --

A That's why I asked you. In the water it's parts per billion; in the living organisms it's parts per

million.

Q My question, sir, was about living organisms. We understand each other now, don't we?

A Sure.

Q Good.

A I understood all along.

Q All right, let's take a look at this. So those figures I read, 9, 10, 36, 40, those are somewhat below that 81 figure which is at the lower end of your range, isn't that right?

A Right.

Q Okay, let's take another figure here, the figure of 160 dry for species of clam. Would you take a look at that for a moment and tell me if you know that that comes from the Narragansett area? I assume you are familiar with a lot of these -

A I suppose it's probably somewhere in the east, yes.

Q Would you know if it's the Narragansett area?

A No, not from that.

Q Well, you have all these volumes in your library and at home; do you know it from your general knowledge?

A I've got several thousands of reprints. Do you

operating conditions; right? That's what you said before; right?

A Um-hum. The organisms were living.

THE COURT: Is a fish with that high a concentration palatable?

THE WITNESS: It depends upon the hydrocarbon, your Honor. If it's a number 2 fuel oil some of the more volatile, easily taken up things may have a little bit more fish taste. It depends, you know -- it's the same way with the different crudes, whether it's a high sulphur crude or low sulphur crude or higher aromatic, because each of the hydrocarbons does have somewhat of a distinct change in odor.

But in general if your fish or shellfish do get up to levels I would say above those or around those, they will take on a fishy odor.

THE COURT: A fishy odor or -

THE WITNESS: I mean an oily odor. And oily odor.

THE COURT: That's above what, 2500?

THE WITNESS: I don't know whether there is any rule of thumb that you could apply there. It -- it varies. In some cases in -- in Texas we do have areas in abnormal operations where there is a -- there

is a lot of spillage, where the oil does taint the fish.

THE COURT: What do you do, use it commercially for fertilizer or --

THE WITNESS: Eat it anyway.

THE COURT: They eat it anyway, they sell it and people buy it?

THE WITNESS: Sure, as long as it isn't too great. Louisianna oysters are -- they sometimes, almost always, have a very taint flavor of a hydrocarbon to them. And yet Louisianna oyster production is absolutely fantastic, and it's edible. Excellent oysters.

Hydrocarbons are a common component in the marine environment. As I told you, by looking at the indiginous or ambient hydrocarbons, which is at an extremely low level, theyare ubiquitous, they have been here since plant life began two and a half million years ago, because I've got bacteria that produce one and a half percent hydrocarbon in their tissues, and many of your Black Sea plants, the cuticle on the leaves is hydrocarbon which washes down into -- into the leaves. There is a description of the different hydrocarbons. Whale oil from the

you know, some range within those variations, that the hydrocarbons are continually lowered.

And when you measure the bacteria you get a higher concentration of hydrocarbon bacteria and you notice areas around the platforms, and at the same time you get low concentrations of hydrocarbons.

Now, ten to the five -- that's a ten -- a hundred thousand bacteria, which is not an abnormal concentration of bacteria at the sea surface, will use by oxidation at 22 degrfes centigrade 3,000 gallons of oil in 24 hours, and this is why we don't have oil up to our you-know-what, because of the continual bacterial policing.

Q Dr. Oppenheimer, when you testified at that MAFLA hearing didn't you take note of the fact that in the Atlntic there was a persistence of surface floating material, oil material or tar balls, and didn't you yourself suggest they might persist because the microbial activities were retarded in a more temperature latitude? Didn't you say that?

A Yes, I think I can make that statement, because a tar ball does not represent a monofilament on the surface of the water and air that I was describing. A tar ball is a physically round structure of very resistent, fairly complex molecules of hydrocarbon and oxidation process. We

know that the bacterial oxidation only takes place at the surface of the water-oil interface, and this is why the tar balls persist. So the statement I made is quite correct.

Q Right, but the persistence is also related to the difference in climate, did you not so say?

A It would -- it would have a -- probably a greater persistence in a colder temperature because the tar ball would take on more of the temperature of the water than the -- than the ambient infrared. It would not act as a surface slick.

Q Now, the studies that under the GURC report we are talking about again, those occurred in less than 100 feet of water, is that right?

A Yes, I think that's pretty close.

Q And again with reference to the report, it is not true that the report showed that in Timbalier Bay there was a high range of hydrocarbons in tissue in the concentration of some eleven parts per billion, is that right?

THE COURT: Would that be billion or million in tissue?

THE WITNESS: Million.

MR. ZEDROSSER: Pardon?

THE WITNESS: We'll excuse the -- it's 1100 parts per million.

Q Well, you say it's 1100 per million?

A I think that's the figure, although --

Q Is it 11 per billion?

A What?

Q Is it 11 per billion?

A It would be 1 per billion.

Q Well, perhaps you can take a look. You have your own copy there, if you like.

A Parts per billion.

Q The top of the range?

A Okay, that's 11,000 parts per million.

Q Yes, but --

A 11 parts per billion.

Q That is what I asked, isn't it, and that is correct, 11 parts per billion; right?

A That is correct.

MR. ZEDROSSER: Could I have one moment, please?

Q In any case to avoid a million-billion problem, I take it that upon looking at it you found it did indeed say 11 parts per billion; right?

A Right.

Q Okay, good.

MR. HYMAN: Well, was counsel right or wrong?

it would be irrelevant, it would only mean to confuse the issue.

I believe that the statements that were made in there relative to the effect of oil, relative to the effect that the coastline, including Chesapeake Bay and Delaware estuary and so on are spawning grounds for most -- I think the figure was 70 percent of the commercial fisheries, plus the statistics for the fish catch supply, the basic information that one needs to know whether the oil is going to impinge itself upon the environment. He doesn't need all of this stuff here. What good would it do?

Q Dr. Oppenheimer, is the NMFS spawning data in there or is it not?

A No.

Q Will you answer -- "No," thank you.

Now, you testified that there was no major oil incident in the Gulf since 1949, is that right?

A I think that's quoted out of the impact statement.

Q Well, no, but that's what you said.

A Well --

Q Is that right, on direct?

A Yes.

Q You did say that, didn't you?

A Yes.

MR. LAFITTE: Your Honor, that's not exactly what the testimony was, and I think it's unfair to' pose a question that way. The testimony related to a particular incident. It was a question about the correctness of the year that was mentioned.

MR. ZEDROSSER: I believe, and the record can be checked -- I'm perfectly happy for it to be checked -- bu t the statement dealt with no major oil incidents.

THE WITNESS: From about 1969, I think I made the statement, yes.

MR. ZEDROSSER: '69?

THE WITNESS: Yes.

MR. ZEDROSSER: Then I ask the record be checked, because I believe it was 1949.

THE WITNESS: No, if I said 1949 it was a slip of the tongue. I apologize to the Court.

Q So your testimony is '69; right? Are you aware that in the Gulf of Mexico in 1970 as a result of a production blow-out there was a spill of some 53,000 to 130,000 barrels of oil, called the Shell Spill; are you aware of that?

A That was the one I was referring to.

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Q Pardon me?

A That was the last incident that I was referring to, and I obviously had the date wrong. I apologize again.

Q That was the last one, okay. There was another one, wasn't there, in 1970, Chevron, Gulf of Mexico, 30,500 barrels?

A 50 barrels.

Q Pardon?

A 50 barrels. I did the work on that one.

Q All right, are you familiar with a book called "Energy Under the Oceans"?

A Only to the extent that I've seen it around the tables here at this -- at this time.

Q I show you -- this is a publication by Technology Assessment Group Science and Public Policy Program, University of Oklahoma, and I direct your attention to this table.

THE COURT: Page?

Q Page 304. I ask you whether it is still your testimony that there was a 50,000 -- was it 50,000 barrel or 50 barrel?

A 50 barrel.

Q 50 barrel?

A That's the one for the Amoco. Here they have

got 400 to 500, and you said 3500. These things, it depends on who you look -- whose data you look at.

Q All right, let's get this straight. Now you're saying that there was a 400 to 500 barrel Amoco spill, is that correct? That's the one you're talking about?

A No, you're saying that. I'm saying it was 50 barrels.

Q All right, we'll start over again.

The one I am suggesting, sir, is not the Amoco spill, I'm suggesting this one: The Chevron 30,500 barrels, 1970, OCS, Gulf of Mexico.

A No, that's the same time as -- near the Shell one, that's about the same date.

Q That's another one, isn't it?

A Yes.

Q I see, okay.

MR. ZEDRICKER: That's it. Thank you.

THE COURT: Any further cross-examination?

MR. KAUFMAN: I'll just be a few minutes.

CROSS-EXAMINATION

BY MR. KAUFMAN:

Q Dr. Oppenheimer, my name is John Kaufman, I represent the Natural Resources defense counsel in this matter. I want to ask you just a few questions, if I may.

A Four and three.

Q Which were the four and which were the three?

A The yellow version were the four.

Q And the green were the three?

A Three.

Q Any other documents given to you by the law firm or anybody else in connection with your preparation for today's testimony?

A Oh, yes, I collected data all over the place.

Q Well, tell me what documents were given to you by the law firm, and then --

A Just these.

Q Justthese documents?

A Yes. Now, since I've been here I've reviewed the other documents of prior testimony. But --

Q Now, when did you begin reviewing the seven volumes that you say you received from the law firm?

A Almost immediately.

Q And you testified earlier that you had about three or four days to read the final environment statements, is that correct?

A I consider it three or four days total time, yes. Within that time period. I have other chores to do, and I did this in the evenings and -- and during the day, and --

Q You did this chore of reviewing the documents during the evenings of those three to four days?

A No, no, I said three to four days within the time period. I couldn't account for the exact time because I was busy doing many other things.

Q Well, can you give us an estimate of how many hours you spent reviewing the seven volumes during that three or four day period?

A Like I say, three to four days. I consider a day a ten-hour day.

MR. LAFITTE: Your Honor, I don't believe that was the testimony of this witness, and I think it's inappropriate to phrase it that way and confuse the factual matter before us.

The witness has testified that he had three or four days working time in a given period.

THE COURT: All right.

THE WITNESS: That's prior to the time I arrived here. I've spent almost all my time here reviewing.

Q During that three to four day period -- Are we referring to three to four calendar days, or are we referring to three to four days of X-number of hours per day?

A I was using it in the loose term. Let's put it thirty to forty hours during the time I got the material

Boesch, Carl H. Horshner, and Jerome H. Milgrim?

A Will you hold it up?

No, I have never seen that publication.

Q Let me read to you from page 15 of that report.

MR. HYMAN: Objection. The man never read the book. He is not familiar with the book at all. He has never read it. There is no foundation for this kind of question.

I understand that the federal rules have been changed, but there still has to be a basis that that book has to be recognized by the witness.

THE COURT: No. You are wrong. By any expert, I think.

MR. LIKE: This book was used by the witness' attorney earlier in the cross-examination of Dr. Milgrim.

THE COURT: I will permit it. Any expert. It needn't be the witness.

MR. HYMAN: Yes. But there are three authors to that book.

THE WITNESS: May I look at the book?

MR. LIKE: Certainly.

Q Having looked at it --

MR. HYMAN: Having looked at a couple of pages

of it --

THE WITNESS: It satisfies me that it wasn't written by a scientist.

Q You don't consider that Donald F. Boesch is a scientist?

A Not as far as any reports that I can recall in hydrocarbons ecology.

Q Do you recall Jerome H. Milgrim as a scientist? You're shaking your head in the negative? Am I correct in reading the body English?

MR. HYMAN: He's thinking.

THE WITNESS: Again, I never read any of his reports.

Q Do you regard him as a scientist?

A I can't say.

Q Do you recall Carl H. Hershner -- H-e-r-s-h-n-e-r as a scientist?

A I don't recognize that.

Q The following statement --

MR. HYMAN: Well, then, I renew my objection. I think even under the new rules, that the text has to be recognized -- it has to be a recognized text of some sort used in some university or for some purpose.

MR. LIKE: The book is a recognized text.

trillion cubic feet of gas --

MR. HYMAN: They have a proposal increasing the price.

THE COURT: I want to know the --

MR. HYMAN: Under the old one and the new one.

THE COURT: I want to know the present one.

MR. TURK: There is a stay on it.

MR. BRUCE: Is this on the record.

THE COURT: Yes, it is. Certainly.

MR. HYMAN: Why don't you give him two values.

THE COURT: There's no hurry on it. Any time this week.

All right, let's proceed, shall we?

CROSS-EXAMINATION

BY MR. ZEDROSSER:

Q Dr. Hoult, my name is Joseph Zedrosser. I am an Assistant Attorney General of the State of New York.

You made a few statements, did you not, on your direct testimony concerning thelikelihood of spills reaching Long Island from certain points?

A Yes.

Q And those points you referred to were simply points within the proposed track area; is that correct?

A That's right.

importance of the different resource values."

Do you admit that those would constitute limitations of this trajectory model?

A Well, all the trajectory models does is predict where the center of area of the oil slick is. I don't see why resources enter into that discussion.

Q Obviously, you are not a marine biologist.

A No.

Q You don't know anything about the -- you know about movement of oil, but you don't know anything about the actual impacts of --

THE COURT: He said that a dozen times.

MR. PICCIANO: All right. I have no further questions.

THE COURT: I have a couple of questions for you.

You studied the center of these oil slicks.

THE WITNESS: Well, that's what the trajectory analysis does. We also have a theory about how it spreads.

THE COURT: How big can these oil slicks get if you have a substantial blow-out?

THE WITNESS: Well, to give you an idea, if you assume when the Torrey Canyon went aground, it

released instantaneously 30,000 tons of oil. Then in four hours there would be a pool about a mile or a mile and a half in radius and a quarter-inch thick. It spreads very rapidly. So you can make -- you can cover a large area rapidly that is on the order of square miles.

In three weeks, the Torrey Canyon spill was spread out in lumps over approximately 300 square miles.

(continued next page)

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THE COURT: So you could have the center of an oil spill as much as 10 miles off shore and --

THE WITNESS: And the edge --

THE COURT: -- and the edge could substantially damage a beach.

THE WITNESS: If it were fresh oil so that it hadn't weathered, yes.

THE COURT: I am talking about oil that is about 2 weeks old, I would suppose that is what we are talking about.

THE WITNESS: Then if it's two weeks old, yes, the center -- then the center of the area is -- the radius over which the oil would be dispersed about the center would be on the order of miles, if it's two weeks old. On the other hand, at that time it would not be in a slick form, but it would be a series of lumps of stuff.

THE COURT: That could substantially damage a beach.

THE WITNESS: It could.

THE COURT: All right. Thank you. That will be all.

(Witness excused.)

MR. LAFITTE: Your Honor, our next witness is

the standpoint of adequacy of the statement to inform the reader concerning a description of a biological community that might be affected by the proposed leasing action, and the impact of the proposed action on the community, what is the significance of the testimony of these parties to whom you referred, in your opinion?

A In some ways, that is incorporated in my previous remarks, because again I think the pessimistic side of the impact is overemphasized, or the deleterious effects of oil, of offshore exploration and production is overemphasized.

If I were to attempt to put myself in the place of someone who has -- is not familiar with OCS operations, I find no resemblance to the scenario which one would -- would -- which would result from reading these impacts compared with the rather peaceful shores of Louisiana, where oystermen are busy harvesting their oysters and griping like fishermen all around the world, and the sports fishermen are busy catching fish, and everybody's going about their business.

There is no oil lying around, there are no explosions, there are no fires. It's certainly -- I -- I really felt a sense of gloom and doom in these impacts.

Other than that I think the statement is accurate.

Q Do you have any reason to believe that the environmental impacts from the standpoint of biology will be more severe in the Atlantic regions than what was experienced in the Gulf of Mexico region?

A I would agree with the impact statement that the -- that there should -- that impacts should not be more severe than in the Gulf of Mexico.

MR. LAFITTE: Thank you.

Judge, no more direct examination.

THE COURT: Any other direct from the defendants? The defendants have no other questions?

Do plaintiffs wish a few minutes to arrange their cross?

MR. ZEDROSSER: Yes.

Actually, I would like to take a look at the exhibit. I don't mean the notes, but the other exhibit. If we could break for an early lunch that would be most appreciated.

THE COURT: All right. We can do that. At one o'clock we will assemble again.

(Luncheon recess.)

MR. O'HARA: Your Honor, before we start could I report on an inquiry which we made with respect to Defendant's Exhibit O which was in evidence, and the witness the other day questioned the numbers on Appendix A --

THE COURT: Yes.

MR. O'HARA: -- with respect to gas efficiencies.

We have inquired of the Federal Power Commission and are advised by them that there was a mistake in Appendix A, that there was an extra m in the designation MMCF, that the short fall for the Transcontinental Pipeline instead of being 39 percent is approximately 45 percent, and that they are going to issue an errata notice. Wehave been unable to get a copy of that, but we will deliver it to the Court as soon as it is available.

THE COURT: Thank you.

MR. O'HARA: I would also ask you to consider the possibility of allowing us to put Mr. Luntey on at the conclusion fo this witness' testimony. I had made arrangements with Mr. Lafitte, and I spoke to Mr. Like earlier in the week and indicated our problem. It was my understanding that they were all agreeable to this, and I would appreciate the possibility of

considering putting him on at that point.

THE COURT: Let's proceed and let this witness finish his testimony.

MR. KAUFMAN: Your Honor, just one other thing: I have a copy of a memorandum we have served on all counsel here. They have been served by mail with respect to your Honor's questions on the coastal zone management. Here is a copy of the brief. The orighal brief with the affidavits of service by mail will be in my hands by tomorrow morning.

THE COURT: Thank you.

You have filed it in Brooklyn, have you?"

MR. KAUFMAN: It will be filed here tomorrow morning, sir. The affidavits of service have been prepared by mail today. The things have all been mailed. Counsel have all been served here.

THE COURT: Well, where is it now, who has it physically?

MR. KAUFMAN: My office has it.

THE COURT: Where is your office?

MR. KAUFMAN: Manhattan, sir.

THE COURT: Would you have a messenger take a copy over to Brooklyn this afternoon.

MR. KAUFMAN: And have it filed? Surely.

ALFRED E. SMALLEY, havingbeen previously duly sworn, resumed the stand and testified further as follows:

CROSS-EXAMINATION

BY MR. ZEDROSSER:

Q Dr. Smalley, my name is Joseph Zedrosser and I'm an Assistant Attorney General of the State of New York.

Dr. Smalley, you made reference to a report on the Chevron main pass block 41 oil spill that you had worked on. I looked at your list of publications and I'm wondering are there any other publications that specifically deal with the effects of oil on organisms?

A No.

Q Now, you testified that for some 17 years you have been traveling by plane and boat and helicopter over various marsh areas, is that right?

A Yes.

Q Now, that study didn't deal specifically with hydrocarbons, did it?

A No.

Q When you were in a plane you were looking down at the marsh for whatever purpose, but that was not a hydrocarbon study per se?

A That's correct.

Q Well, prior to the Chevron study referred to, had you ever done any work, whether published or not, dealing specifically with the effects of hydrocarbons on organisms?

A No.

Q How is it that you came to be involved with the block 41 study?

A This was a study of the effect of an oil spill on the biota of the area, and it's necessary in these samples not only to become involved in the design of the experiment but to identify it correctly, as correctly as possible, and to count the organisms involved, and then to assist with the analysis of the results --

Q Doctor, I was asking you how you came to be involved. Perhaps you misunderstood me. I'm sorry.

A I'm sorry, I thought you wanted to know what it was that I did.

Q No.

A I was a consultant for a private company.

Q Well, who approached you as a consultant to get involved in that particular study?

A We offered our services to the Chevron Oil Company.

Q And they of course paid for your work, did they not?

A Yes.

Q Now, you testified at hearings, did you not, concerning the outer continental shelf?

A You'd have to make that a little broader because I have testified on on-shore impacts of outer continental -- outer continental shelf activity.

Q But not on the effects of hydrocarbons in the sense that we've been talking about them today?

A When you use the word hydrocarbons, do you mean specific chemical damage to organisms or do you mean the broader area of damage by oil spills to organisms?

Q Well, all right, I'll withdraw that. Let me go to another point:

At whose behest did you testify concerning the outer continental shelf?

A The firm of attorneys Liskow and Lewis.

Q And do you know for whom they were acting?

A Not when they retained me. I never asked them. But eventually, of course, I found out.

Q And whom did you find out they were acting for?

A I have -- mostly on behalf of the offshore operators committee.

Q Now, you referred to reviewing outer continental shelf impact statements prior to the ones that are

Donkin, and I am familiar with the studies of the Federal Power Commission. The figure that he gave was 2,750,000,000 cubic feet daily, if I read that correct.

Q What amount of the shortfall would that cover?

A Of the shortfall in this Appendix A, that would cover only about 25 per cent. If all of those -- all of the presumptions that Mr. Donkin made were true, approximately 25 per cent of the shortfall that is listed on Appendix A might be overcome then by that additional production.

Q Do you have any reason to question the accuracy of the figure given by Mr. Donkin?

A Yes. I believe Mr. Donkin included at least four trillion cubic feet. That is also included by the pipelines in their reserve estimates.

In other words, this is gas which may be at different levels in the same well. If you're drilling a well and you go through multiple sands, for example, you will not begin to produce the sands that would produce at lower pressure. You will produce the higher pressure sand first and keep the lower production sand for a time when you can use that same well to produce the upper or lower pressure sands.

I think probably four trillion cubic feet of the -- of the estimates that Mr. Donkin made are in that

Q Mr. Lunty, my name is Joseph J. Zedrosser. I'm an Assistant Attorney General of the State of New York.

Mr. Luntey, did you testify on July 18th, 1975 before the ad hoc select committee on the outer continental shelf of the United States House of Representatives?

A Yes, I did.

Q That's the so-called --

A I think I did. I can't be sure of the date. I certainly testified before it.

Q It was about that time?

A Yes, in the City of New York.

Q In other words, that's the Murphy Comittee.

A Yes, that's correct.

Q And did you testify at that time as follows:

"There is excess gas in Texas now. We cannot buy it. We have been offered thatgas and we cannot buy it because of the legislation which says that the regulated price is the one that applies to interstate pipelines.I'm not saying that Congress has not recognized the energy problem in this country, but my problem is that I think they are playing politics with it."

A That sounds like something I would say. I did say that, yes.

A Then the figures are exactly the same as Mr. Donkin's, because he assumed a ten trillion cbic feet reserve, and if there is ten trillion cubic feet discovered in sale 20 25% of the short fall of these companies would be supplied from that one sale.

Q You have testified as to the -- withdrawn.

In Exhibit CC, Defendant's Exhibit CC, the no growth scenario for state-wide gas requirements and supply, you show a number of calendar years beginning with 1976, continuing in the last column to 1985, and under each calendar year column you show an estimate of either the surplus or deficiency for the respective years.

Do you have the copy of your exhibit in front of you?

A Yes, I do.

Q Under the year 1977 you show a deficiency of 13060, is that MMCF?

A That's 13 billion cubic feet. I prefer to handle it in billion cubic feet. It's 13 -- 13 Now MMCF, that's correct, yes.

Q Would you agree with me that that deficiency in 1977 could not be alleviated by production from the OCS sale 40, even if the least sale were to occur on August 17th?

A Oh, I would certainly have to agree with that

because no gas will be produced from these leases for probably five years. It takes that long to get into production and -- into production on a lease.

Q Is five years an optimistic assumption, or would you be willing to agree that it might be longer than five years?

A Could well be longer -- five to eight years is the period that is generally used. Now --

Q All right, now if you assume and eight-year lag between the lease sale and the production of gas in commercial quantities, I assume then that there will -- there would be no relief that would be forthcoming from production on lease sale 40 until the year 1984.

A I think that's reasonable to assume that it will take that long to get significant production from the outer continental --

Q If, for the sake or argument, we extend that year to 1985, which is the year that appears in your exhibit CC, you show for the year 1985 a deficiency of 40 million cubic feet; is that correct?

A That's correct, yes.

Q Over what time frame?

A That's per year.

Q That's per year?

cover the deficiencies of New York State?

A It could, yes.

Q Now let's go back --

A There are a lot of assumptions in there, and that is that the maximum production is reached and that the maximum reserves are discovered, of course.

Q And your estimates now have been on using the optimistic high end of the range, is that correct?

A That's correct, yes.

Q Now, if it were possible to increase production from producible shut-in leases or non-producible dedicated reservoirs how soon could that gas be flowing into New York gas consumption markets?

A If Mr. Donkin's assumptions are correct and -- and these are connected reserves that are being held back and they are already connected to pipelines, those reserves could be theoretically produced immediately. If they are not connected to pipelines, you would have to allow a period of time, probably up to two years, before pipelines are laid to the leases in the -- in the Gulf of Mexico, and the gas could be produced from those leases.

Now, I -- I'm not sure from his testimony whether he meant that the production wells had been drilled to prove these reserves, because that of course would be

necessary, to drill the production wells.

Q Given your qualifications and assumptions with respect to the accuracy of Mr. Donkin's estimates, am I correct in stating that gas released from producible shut-in leases and dedicated gas reservoirs would bring relief to the New York State gas market sooner than production from the OCS Sale 40?

A I think there is no question that the gas that is now ready to produce and could be produced within a two-year period should and would and -- and ought to be produced to relieve these shortages immediately.

Q I'd like to go back now to your table exhibit CC, Mr. Luntey.

A I should put the numbers on these.

Q Yes, this is the statewide gas requirements and supply --

A That's right.

Q -- no growth requirements scenario.

A Right.

Q I nmaking the estimates which appear on this exhibit, what assumptions if any were made regarding the price of natural gas duringthe years in question?

A These are estimates from our pipelines as to their ability to -- to supply gas, and these estimates were

made I'm quite sure in June of this year. And that would be before the FPC decision.

Q At what price levels then were these estimates based?

A At that time the regulated interstate price was 52 cents.

Q Are you able to sensitize that figure in this way, Mr. Luntey? Assume that the price level for the sake of constructing a similar chart or a similar table were the price level that has now been approved by the FPC, what change if any would you have to make in the estimates of gas supplied and either surplus or deficiency on the bottom line?

A Well, on my own estimate -- and -- and I have to differentiate that from Mr. Donkin's estimate --

Q I'm talking about your own estimate now.

A Yes, my own estimate is that there isnot any significant quantity of gas that can be immediately produced, so the $1.42 would stimulate additional gas drilling and additional gas production on shore and offshore. And in that respect the later years, 1975 -- or 1979 to 1985, there might be a revision in the pipeline's estimate of their demands. Now, there is no -- no proof one way or the other that -- that that price will or will not produce extra gas.

Q If I understand you correctly, you're saying

that if the price were the price that was recently approved by the FPC that you would have to change the supply figures for the 1979 year column to reflect an increased supply of gas?

A I'm saying that the pipelines might reevaluate their -- their estimate of supply in those years. If the price does in actuality produce additional production -- natural gas production and drilling.

Q Well, in your opinion and based upon your experience, would an increase in the price call for additional supplies?

A Yes, I -- I actually believe that the $1.42 will cause a significant increase in -- in drilling.

Q So that am I correct in stating that the supply figure which you show in the 1979 column as being a 537,130 would be a substantially higher figure?

A It could be, yes.

Q Is it likely that it could be --

A I think it's -

Q -- in your opinion?

A -- likely that it will be higher than it would have been at 52 cents, on which these figures were based.

Q Do you have a back-of-the-envelope estimate as to how much higher it would be? Would it be doubled,

would it be 25 percent higher?

A I couldn't begin to estimate.

Q Has your company or any trade association with which your company is connected made any estimates of a sensitivity judgment nature to calculate what additional supplies will be coming onto the market at the increased price of $1.42?

A I don't know of any such studies, no.

Q Do you know whether the industry has presented any data to either the Federal Power Commission or to any Congressional committee or to the Federal Energy Administration or any other regulatory body making estimates as to what an increase in gas prices would result in in terms of additional supplies of gas?

A Well, a number of years ago there -- there were studies introduced which showed various price levels versus expected increased production. Now, that was considerably before the intrastate price went as high as $2 and I think those studies -- and I don't have those studies with me, obviously, but I would think those studies would be well out of date now considering the intrastate price of gas.

Q Are you saying then that you know of no current estimates of what the additional gas supplies would be if the price were assumed to be $1.42?

A I don't know of any definitive studies of that kind.

Q If in fact the gas supplies for 1979 were increased to reflect a response to higher gas prices or to the higher gas price of $1.42, then I take it you would agree with me that the deficiency shown in that column would have to be accordingly reduced?

A Yes it would.

Q And at this time you have no figure that you can give us or a range of figures as to what the deficiency would be at the increased price of $1.42?

A No, I don't.

THE COURT: Don't answer.

MR.LIKE: Sir?

THE COURT: You are getting very repetitive.

MR. LIKE: I'm sorry, your Honor, I didn't intend to. I wanted the table to be connected with the record.

Q Do you have an opinion as to the likelihood of further increases in gas prices above $1.42?

A Yes I think there is a built-in escalation in the $1.42. It's one cent per -- per 6 months, I think it is. I'd have to look at that -- that order, but there is a built-in escalation in addition to the $1.42. The producers

State Gas Report, which is a very thick volume that -- that shows in quite a great detail the calculations for each and every company within the state.

Q Are the conservation measures that you have described in the nature of voluntary conservation at the urging and at the education provided by the industry?

A Yes, they are -- they are conservation measures that the companies do voluntarily, but certainly at the urging of both New York State and the PublicService Commission of New York State.

Q Have you made any assumptions as to the amount of energy conservation that might result from mandatory measures and from the effect of legislation such as the recent Energy Policy Supply Coordination Act?

A Well, I -- I got today, interestingly enough, an energy conservation bulletin. I am an elected official of the Village of Sands Point, and this came from Francis E. O'Connor, Commissioner and Energy Administrator for the County of Nassau. And it says "The Federal Energy Administration is presently considering energy conservation contingency plans for implementation without notice in the event of a severe energy supply interruption."

And as background it says "The plans for energy conservation, rationing of gasoline and diesel fuel

are for energy emergencies and to fulfill the U.S. obligation to the international energy program. Imported crude oil now exceeds 7-million barrels per day as our domestic production is declining. We crossed the 50 percent line in March 1976" --

Q Excuse me.

A Then it goes on to -- to outline mandatory conservation measures.

Q All right, my question was, Mr. Luntey --

A And we have not had a chance under these listings to -- to calculate how much the energy saving would be.

For example it lists thermostat settings of 65 degrees. Now, we can urge our customers to set their thermostats at 65, but there is no way that the gas company can go out and police that.

Q Am I correct in stating that in preparing Exhibit CC and in making your estimate of gas demand, you did not take into account or attempt to quantify the impact of mandatory conservation measures, such as some of those which you have just read off?

A No, we certainly did not assume that our customers would be subjected in New York State to anything nearly as severe as these curtailments.

(Continued next page.)

Q Well, aside from the curtailments which you just described, have you made any assessments of the impact of conversion measures such as those that are offered by the energy supply and control act?

A I am not familiar exactly with what it is that you are referring to.

Q Turn to another subject, Mr. Luntey. Am I correct that the subject of reserves, gas reserves that you are relying upon in your assessment of the gas shortage are the reserve estimates that have been put out by the American Gas Association?

A The estimates that are given on Exhibit CC are estimates directly from our pipelines, and their ability to purchase natural gas over that period of time, and have nothing at all to do with the estimates that the American Gas Association in connection with the -- that a great number of other experts publish.

Q Well, what -- on what are the estimates of the pipeline -- where do they get their estimates of gas reserves?

A They are based on their field operations. They go out in the field all the time endeavoring to purchase natural gas. They have connected to their line a certain

number of wells. And they know quite accurately the life of those wells because of their history of production. Their estimates are based on what they consider their best ability to purchase natural gas through this period of time.

Q Well --

A They are not necessarily on any widespread reserve estimate such as the American Gas Association estimates.

Q Well, ultimately, aren't their estimates of gas reserves based upon certain assumptions as to how much gas is out there in the fields?

A Obviously.

Q Don't you have to -- don't you have to get some indication from the natural gas producers as to what they consider to be their reserves?

A No question about it. There is no question about it.

Q Do you have any numbers as to what the natural gas producers estimate to be the gas reserve?

A No, I do not.

Q Are you aware of certain hearings that were held by Congress regarding the subject of energy data requirements of the federal government, resulting in the issuance of the report of the Subcommittee on Activities of

regulatory agencies of the Permanent Select Committee on Small Business, which report dealt with the problems of reserve reporting and discrepancies in reserve reporting?

A Yes, I am aware of those hearings.

Q Could you tell us what the controversy was with respect to the estimates of reserves and the problem of reporting reserves?

A Yes. The controversy was that the American Gas Association, in order to allow its members to more prudently plan for the future has for many years gotten together what it considers to be the most reliable reserve of energy -- of gas energy, proven reserves. These are fields that have been drilled and to a certain degree have reliability. You can -- it depends on what the reserves are in those fields. And then taking the known data from a large number of sources and putting that data together with certain assumptions for fields not know, the American Gas Association for its members has published for many years a total proven reserve estimate for the United States. These hearings challenge those reserve estimates and said that they were too low, said that there was far more gas available than were shown in the AGA reserve estimates, but did not go on from there to show how such gas could be produced and delivered to the State of New York.

Q Did you agree with the findings of the Committee that the American Gas Association has been understating gas reserves?

A No, I certainly did not. And I think that the findings of that committee have come under considerable questioning.

Q Do you agree with the finding that the American Gas Association reserve estimates were regarded as unreliable and misleading?

A I certainly don't agree with that. And the point of all this is that if they are twenty-five per cent too low, we are perfectly willing to take the higher figure of reserves. It doesn't make a bit of difference in the need for outer continental shelf drilling as to whether those reserve estimates are 25 per cent high or 25 per cent low. They are a guess, at the best. And they are the best guess that the American Gas Association with all its various members can make at this time. But to deliver gas to New York, you have to produce it at a price, which I think the Federal Power Commission has done now, and you have got to get people in drilling areas where there may be gas. And that's why the outer continental shelf is so important.

Q All right.

MR. LIKE: Your Honor, this concludes my --

I am sorry, withdrawn.

I would like to ask the Court to take judicial notice of the energy data requirement report that I have identified, and in particular pages 32 through 35, concerning the problems of gas reserve reporting and the discrepancies in reserve reporting, and containing the findings with respect to the unreliability of the American Gas Associationreserve estimates.

THE COURT: Mark it in evidence.

THE CLERK: Report received in evidence as Plaintiff's Exhibit 115.

Q Mr. Luntey, are you aware of the report that was prepared in November, 1975, entitled, "Natural Gas Supplies: Declining Deliverability at Bastian Bay Field, Louisiana," a report by the Subcommittee on Oversight and Investigations of the Committee on Interstate and Foreign Commerce, House of Representatives, which makes certain findings as to the causesof the decline and deliverability of natural gas at Bastian Bay filed in Louisiana?

A I am not aware of that report. We have been in the Bastian Bay case for many, many years but --

Q Whenyou say "we have been" --

A Brooklyn Union, in the federal area, it has

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Q Whenyou say "we have been" --

A Brooklyn Union, in the federal area, it has

been.

Q Does Brooklyn Union have an interest in the Bastian Bay fields -- the gas fields?

A I have to consult with Mr. Dunlop as to whether we get any gas from Bastian Bay. But some of the issues in the Bastian Bay field are of course of natural gas interest.

Q Would you tell us what the issue there is and what bearing they --

A Again, I am not familiar with this report so I can't tell you.

Q Well, do you have any independent knowledge of the findings of the --

A No.

Q (Continuing) -- of the committee?

A No, I don't.

Q Well, let me see if I can refresh your recollection, and perhaps through the trade association or through the report that you read or the information that comes to your attention as the executive of the company, this might ring a bell.

"The report is an in-depth analysis of the causes underlying the sharp and unexpected decline in production of natural gas from a large field dedicated to interstate commerce."

I am skipping.

A 782

"The report concludes that the two producers—"

And in this instance, the two producers were Getty Oil Company and Tennaco, Inc.

"have not undertaken sufficient drilling to maintain deliverability in this field, with the result that the field may be produced over a period of 52 years instead of the 20 to 25 years originally contemplated or the industry standard of fifteen to twenty years."

MR. O'HARA: I object. Counsel is apparently reading information into the record under the guise of a question. The witness has said he is not familiar with this report. He has indicated that his company has been involved in some way in the Bastian Bay case, but he said he doesn't have direct knowledge of it.

THE COURT: I will permit it. Obviously, he is going to ask a question after he finishes reading.

Give us the page.

MR. LIKE: Roman III. It is the first page inside the cover.

Q "The report concludes that the two producers have failed to resolve substantial differences of opinion on the geology of the field with the result

that development has been delayed. It further concludes that the producers have failed to conduct studies of appropriate ways to accelerate production of the field, as recommended by one of their petroleum engineers. The report thus represents further evidence that gas producers which anticipate higher prices as a result of contemplated deregulation of natural gas prices have failed to do needed work in order to maintain deliverability."

Does that refresh your recollection as to the subject matter of that investigation?

A I remember reading that kind of accusation in the literature, yes.

I have not read this report.

Q Do you have any knowledge which would enable you to either confirm or refute the findings of the committee?

A No. I suggest that we await the results of the $1.42 and see if the Bastian Bay field starts to produce. And that would prove that these companies have been delinquent in the past.

Q Well, Mr. Luntey, the report states that one of the factors that is responsible for the supply shortage in the interstate market is the declining deliverability of

gas from already-developed gas fields. And this statement appears on page 2. Do you agree with that finding?

A We know that it's true because if you drill a gas field it starts declining from the day you start producing.

Q Do you agree with the findings of the committee as the cause of the deliverability?

A No, I have no direct knowledge as to whether Getty and the other company were directly for deregulation or not.

MR. LIKE: I offer the report in evidence.

THE COURT: All right, I will take it.

THE CLERK: Report received in evidence as Plaintiff's Exhibit 116.

MR. LIKE: That concludes my cross-examination, your Honor. I would like again at this point to underscore the offer of proof that we made as to any competitive impact, and, of course, the extent to which any competitive considerations are responsible for the gas supply shortage and withholding of supplies from the market. I believe it is an issue relevant on the question of reply responses.

THE COURT: All right. Anything further?

MR. PICCIANO: Yes, your Honor.

A 2.4.

Q All right. This is talking about a case of 2.6, right?

A I will agree with that.

Q That is pretty close.

A I am surprised it's that close, but I agree it's close.

Q All right. Now, you have both talked about 8 plants; is that correct?

A Yes.

Q Now, I am a little confused by the size of these plants. You said that each of these gas processing plants take up 75 acres, didn't you, on Page 26?

A Yes sir.

Q Okay. As a matter of fact, again, on Page 60, you discussed that? The bottom of the page. Did you not? Will you take a look at it?

A What page?

Q Page 60.

A Yes sir.

Q The sentence says, "As a matter of fact, gas processing plants, for example, requires about 75 acres of land however it is."

A Correct.

Q Okay.

A I mean that's the quotation. Yes.

Q That's pretty well known in the industry, isn't it?

A Yes, I believe so. Because that's where I got the information from.

Q And anyone who is asked a question about how big a gas processing plant will be from anybody who has information is going to get back an answer that it's 75 acres, right?

A I don't know. It depends on who you ask. But my experience was that the person that I asked gave me that answer.

Q And the United States Geology Service, the USGS, could have found that out?

A I assume so.

Q And the Department of Interior could have found that out?

A I assume so.

Q All right. Now, if you were going to have 8 of these plants, you were going to need 600 acres?

A Yes.

Q That's the number you put in for land use?

A Right.

Q Okay. And you again repeated 8 plants on Page 61, didn't you?

A On Page 61?

Q Yes. Right.

A No, I don't see that.

Q This total, two-thirds will be invested in the 8 gas processing plants anticipated?

A We are not talking about acres. No.

Q I am talking about acres. But you are talking about 8 gas processing plants?

A Yes.

Q There's no doubt in your mind there are going tobe 8 of them using 600 acres?

A Under the assumptions that are up front on this report. There is nothing in our minds that 8 gas processing plants were the logical conclusion.

Q All right. You testified yesterday about the chart on Page 280 of the impact statement, Volume 2?

A Yes, I did.

(Continued next page.)

BY MR. KAUFMAN:

Q And you testified that Chart 3, Roman III-33, had adequate figures with respect to on-shore need? Did you testify to that?

A Yes.

Q And you considered it adequate?

A Yes, adequate and reasonable.

Q In your expert opinion it's adequate?

A And reasonable.

Q And reasonable. Okay, now, in that chart the gas processing plants appear?

A Yes, sir, they do.

Q Okay, what is the figure that they have for a gas processing plant?

A 20 acres.

Q That's about one-fourth of what it takes; right?

A It's about -- well, it's about one-fourth of -- about 75.

Q Right. But you said you know it's perfectly obvious in this business -- right -- that it takes 75 acres, don't you? You checked that out with the industry?

A I don't think I said that it was perfectly obvious, I said the information we had suggested that 75 acres were required.

Q Did you read Dr. Mitchell's testimony in this area?

A Yes I did read it.

Q He pointed out that it runs around that too, didn't he, that there are different ranges, sometimes a hundred, sometimes less, that he sees? Sometimes not 20?

A Well, sometimes much less, sometimes 20. No, I won't agree that it's sometimes not 20. It often is quoted as 20 acres.

Q But the number that you picked was 75?

A Right.

Q That's the number the industry picked; right?

A That's the number that the man that I asked in the industry gave me, and I had no reason to doubt him.

Q If you take 8 plants of 20 acres what do you get?

A 160 acres.

Q And if you take 8 plants at 75 acres, what do you get?

A 600 acres.

Q So you were off by 440 acres?

A Yes.

Q So it would not have been unreasonable for the impact statement at least to add 440 acres to that 645; right?

A No, I think it would have been unreasonable. They wouldn't have added 440 acres on the basis of the data they presented here. It would have been an unreasonable thing for them to do. Adding 440 acres is not consistent with their -- their information.

Q Their information is that they are going to take 20 acres?

A Yes sir.

Q But the industry information you have is much more?

A Yes, that's correct.

Q And the information that Dr. Mitchell had is much more?

A Yes.

Q And the information that the Department of the Interior could have gotten from the industry from the same sources you have is that it could have been that size; right?

A Yes, but other information they had access to would suggest it's much less.

MR. LAFITTE: I would suggest, your Honor, that the witness be permitted to complete his answers.

THE COURT: Yes.

THE WITNESS: I -- in fact in that response I think I should point out in order to complete that

Q Did you read Dr. Mitchell's testimony in this area?

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MR. LAFITTE: I would suggest, your Honor, that the witness be permitted to complete his answers.

THE COURT: Yes.

THE WITNESS: I -- in fact in that response I think I should point out in order to complete that

answer that the Library of Congress study done for Senator Murphy's committee also uses the figure of 20 acres for gas processing plants.

Q Where did theyget it?

A I don't know where they got it.

Q Could they have gotten it from the API?

MR. HYMAN: Objection. Speculative.

Q Did you testify yesterday about Exhibit 19, Technical Paper No. 1, the Harris Report?

A Yes sir.

Q You testified that while you were not an economic expert you went over the assumptions and you assumed that they were pretty good assumptions, right, or you accept that they were pretty good assumptions; is that right, sir?

A I accept that they are reasonable assumptions. I'm not sure how good they are.

Q And actually the basis of the whole economic analysis of the EIS is based on the Harris Report?

A No, I don't think --

Q Is that correct?

A I don't think that's essentially correct at all.

Q Doesn't it state that?

A No, there -- their analysis is based on an

analysis that's supplemented by examples from the Harris model.

Q They don't say that their economic analysis comes out of the Harris model and technical paper?

A I don't recall that they specifically state that anywhere. They simply site the tehcnical paper number 1 at numerous places in the Environmental Impact Statement.

Q Okay. One of their assumptions is on Page 53. Would you turn to it?

A Page 53?

Q Page 53, Number 18. And they say that there are going to be 18 land -- excuse me, 4 land terminals, and they give tentative locations --

A No.

Q -- is that right?

A I wouldn't use the word tentative. I'd use the word hypothetical or illustrative locations.

Q But things on which they base their analysis of what was going to happen in the economic analysis and the impact analysis; right?

A Right.

Q Okay. Now, and those all four are in New Jersey?

A That's correct.

Q Now will you turn to Page 52 --

A Yes sir.

Q -- and look at hypothetical -- assumption number 7.

A Yes.

Q And that gives you 4 pipelines coming from gathering places offshore, going through those terminals up to the terminals at -- up -- which would be at the refineries, is that correct?

A Yes, that's the substance of that assumption. Yes sir.

Q All right, now, will you add up what the mileage of those four pipelines is?

A 810 acres. Is that correct?

Q No, 810 miles.

A 810 miles.

Q 810 miles of pipeline, right? And that doesn't count gathering pipeline, that's just the main pipeline; is that right?

A Well, this is on-shore pipeline, I believe.

Q Look again and see.

A Okay. Okay, yes, this is a combination of both on and offshore pipeline.

Q All right, now, I would direct your attention please to Page 17 of Volume 1.

A Okay, I've got it.

Q I refer you to Item No. E, and what does it say there?

A E is called "Miles of offshore pipeline."

Q Now, we have two numbers, don't we, we have --

A We have four numbers as a matter of fact.

Q We have the total pipeline number, and it's 810; right?

A Correct.

Q And we have the offshore pipeline, which is 570, is that correct?

A Correct, yes.

Q Now, by subtracting offshore from total we can come up with on-shore, can't we?

A Yes, presumably.

Q An estimate. What's that number?

A 240.

Q 240 miles of on-shore pipeline?

A Is that right?

Q That's correct. So far your mathematics is very good.

A Thankyou.

Q Yes. And now we are up to 240 miles of on-shore pipeline. Now --

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A I don't think we are up to any miles of on-shore pipeline. What we are doing is taking somebody's hypothesis --

Q Okay.

A -- and extending it.

Q Now I would refer you to Page 60 of your report, Doctor, the bottom of the page?

A Yes sir.

Q Page 60 did I say? Down at the bottom of the page, is this a statement that appears:

"It is possible to note however that construction of buried pipelines within a nominal right-of-way 75 feet in width temporarily disturbs only 9 acres of land per mile."

A That's a direct quote, yes.

Q So that it's your concept that a nominal right-of-way for a pipeline is going to be 75 feet?

A It's an assumption built into this report, that's correct. That's not always true.

Q Nominal is your word, isn't it?

A Yes, right.

Q Now, will you multiply for me, please, 9 acres a mile times 240 miles?

A If somebody had a pocket calculator this

necessarily occur.

Q Now, on page 110 of your report you said a multiplier for induced jobs of 1.8, isn't that correct?

A Yes sir, that's correct.

Q That means that the number of jobs that will be created as a result of jobs that are directly in this industry, there are 8 jobs for every 10 jobs in the industry?

A No, I believe we said that there are going to be 8 induced jobs for every 10 jobs. That would be a combination of the direct jobs and the indirect jobs. Indirect jobs are not necessarily a part of the petroleum and gas industry.

Q Okay, but that multiplier is 1.8?

A Yes, sir.

Q And as a matter of fact you stated that's an accurate one, a more accurate one than the larger -- didn't you state that?

A Yes, we stated it was the multiplier with which we could agree, obviously, because we used it.

Q Well, you went a little further than that, didn't you?

A Yes, in fact --

Q That you said is "The relatively lower multiplier appears to more accurately reflect the increment

But the OCS orders which implement the intent of the regulations are constantly under review and updated to bring them into compliance with the best technical provisions that are available and to be up with the state of the yard.

Q and if these regulations of operating orders are changed, will preexisting or prior leasings be subject to the new orders or new regulations?

A Yes. Insofar as they relate to the conservation of resources and the protection of the environment. That is, provisions of the lease instrument itself.

Q And other than that qualification, is there any final limitation of any kind on these new controls that may be imposed upon lessees?

A Well, there is a practical limitation. You wouldn't want to impose a change on a piece of equipment if you -- if it resulted in shutting down your production. You would have to get a trade off, an economic trade-off of what was practicable to enforce on the lessee.

Q Is that the only limitation that you are aware of, as far as the extent to which these new controls may be imposed?

A Yes sir. That's about all I know of.

Q Now, in your twelve years of experience in the Gulf area, were the operating orders ever changed in the

A Yes, sir that's right.

Q Now, referring specifically to the operating orders for Mid-Atlantic lease sale No. 40, do the operating orders themselves in so many words require that the state of the art or the best available technology or the best technical provisions be employed? In so many words, do they say that?

A Yes, sir, they -- they are minimum requirements on the operators.

Q Well, perhaps you could then tell me as to let's say operating order No. 7, because you mentioned that one specifically, wherein that order it is stated that the best technology must be used for clean-up, which is the subject of that order, containment and clean-up of oil spills.

A Well, there is one provision right at the last of that order which is an annual contingency plan assessment, which requires that any plan that they submit to you being at least reviewed annually.

Q Maybe I haven't been as clear as I ought to be. The question I am asking is whether there is anything in operating order 7 that requires that those plans include state of the art technology or best available technology or anything like that?

A It does -- it doesn't specify in the order as it is written that that is what is required. The -- the general overall requirement that we have is that we are continually revising and updating these orders to provide the -- the best technical capability.

Now, in this process we are -- our visiting operations on a daily basis to various parts of our -- our offshore production facilities, and we have what you would call a -- a technical exchange of information which occurs. In other words, our -- our inspectors come across an operation on a particular company's platform which is innovative and new and something better. This is reported back to us, and we have discussions with -- among ourselves, we define what some of these new changes should be, then we go through the procedure of -- of refining the OCS order which covers the operating of this.

So I -- I -- I suppose that is maybe what you are looking for.

Q Well, it is not exactly what I am looking for. What I was looking for was something very simple. In other words, you are not suggesting then that the operating orders themselves require in so many words best available technology; you aren't saying that, are you?

A No, what we have always tried to tell the

operators is that these orders are minimum requirements. Those are oral understandings.

Q But sir, you're not saying that the minimum requirements in so many words require best technology, are you?

A No.

Q You are simply saying that USGS does a good job is that what you're saying? Withdrawn.

When you say we have a requirement, you don't mean that in terms of a written requirement, do you?

A I -- I guess -- I'm sorry, I'm not following.

Q You testified before that "We have a requirement where we upgrade the technology dealing with a particular item." You don't mean a written requirement that so states?

A Oh, no.

Q And you are not claiming that there is such a written requirement in the stipulations for lease sale 40 either, are you, the one that says in so many words, "You shall have best available technology"?

A No, not in the stipulations, no. No, that's a legal requirement on the lease, the stipulations.

Q The stipulations are? They don't include that requirement?

A No.

Q This is just some kind of a policy you're talking about, but it's not set forth in writing?

A Not -- not particularly, no.

Q I see. Now, you mentioned the inspections, did you not, and you have a particular requirement of inspections, is that right?

A Yes.

Q Now, you were supervisor at some high level of responsibility in the Gulf, weren't you, in the fiscal year '72?

A Yes, sir.

Q Are you aware that the Government Accounting Office on behalf of the Comptroller of the United States made an investigation of inspection procedures of USGS during that period of time?

A Yes, sir.

Q And are you aware than that the conclusion was that the Survey did not inspect structures as frequently as required by standards set by the region or by official Survey policy? Are you aware of that?

A Yes, sir. Can I amplify on that, sir?

MR. ZEDROSSER: I am sure the Judge will let you.

A 804

THE COURT: Yes, you may.

THE WITNESS: The requirements that we had were in our OCS orders that we made up, which required that we inspect our drilling structures and our producing platforms with certain frequencies, and we were not staffed at that time to accomplish what our intentions were for inspections. Therefore, we -- we couldn't inspect with the frequency that was specified in our orders.

Q Well, isn't it fair to say that what the GAO found wasn't just a matter of frequency of inspection -- let me be specific, sir, and ask you: Didn't they also find that in some instances uninspected equipment was reported as inspected, items of non-compliance were not noted in the inspection reports, and that no inspection reports were prepared for certain types of OCS operations? Wasn't that among the criticisms of GAO at the time?

A I don't recall that specifically. I assume that what you're reading is correct.

Q Well, I do want you to be specific. Is that a fair --

A Yes.

Q (Continuing) -- statement?

A That's correct. There was not a uniform

inspection and instructions formulated at that particular time.

Q Well, sir, when somebody reports something as inspected which was not inspected, that's not defective instructions, is it?

A I -- as I recall, we took some exception to what GAO reported in that particular document.

Q Now, you also testified, did you not, that the suspension of operations was a strongcompliance maasure; is that not your language, or pretty close to it?

A Yes, sir.

Q Now, are you aware that a 1972 U.S. lease management study found that the threat of production losses was insufficient to secure compliance and that such losses did have an impact, but instead of increased compliance industry's response led to decreasing the length of shut-ins by stockpiling parts and making an effort to correct during inspection? Are you familiar with that report? That was during your tenure, was it not?

A Yes. I am not sure whether that's the same GAO report or not.

Q No, I indicated it was a USGS report, sir. Are you aware of that report?

A Yes, sir, yes.

Q Your own department's report. And did it so indicate?

A Yes, it did.

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Q Now let's go back for a second to the GAO report. Are you aware that that report concluded that "Since the inception of the lease program no leases had been cancelled" -- and I say parenthetically this relates in connection with oil spill prevention, not for other reasons -- "...and that fines had been levied only once in 1970 for failure to install required safety devices,"-- and that "to enforce its regulations the Survey has relied principally on written warnings, and in the Gulf Coast region sounding operations"?

A Yes, sir.

Q Do you recall that finding?

A Yes, sir.

Q And do you recall the finding that the Survey needed to strengthen its enforcement actions?

A Yes, sir.

MR. ZEDROSSER: I don't think I have anything further.

THE COURT: Any other Plaintiffs?

CROSS-EXAMINATION

BY MR. PICCIANO:

Q Mr. Evans, John Picciano is my name. I represent the County of Nassau in this action.

Mr. Evans, you alluded to in direct testimony the power to suspend a lease in the event of some kind of an

Q What is your understanding approximately of the frequency of oil spills?

MR. JENSEN: Objection. Beyond the scope of the direct. He did not testify about oil spills or incidents in any area.

THE COURT: Overruled.

MR. PICCIANO: Your Honor, he stated --

THE COURT: Overruled.

Q Please answer.

A The frequency -- they are generally characterized as to the size of the spills. In the Gulf of Mexico there are approximately 250 to 300 a month.

Q 250 to 300 amonth?

A Yes sir.

Q Of what size?

A That's from -- oh, a gallon to perhaps as much as 10, 15 barrels.

Q What would you say generally are the cause of these spills?

A I would have to categorize the majority of them as being human error in the sense of doing something they shouldn't do or failing to maintain a piece of equipment.

Q And with respect to these 200 or 300 instances per month, what is the percentage of those that actually

Well, I myself don't see the fair market value as a problem, but it's arguable, and that seems to me to be something you might want to consider.

The Coastal Zone Management Act is, it seems to me, a troublesome matter. I have referred to it a number of times. You already have preliminary briefs on it.

In part, it's a chicken and egg problem, but in part it's a serious problem with respect to what Congress intended; that is, did they intend the states and localities to get involved before the decision was reached that was a no-return decision, which as I understand it is the lease for exploration and production decision, because after that with only small limitations there is very little you can do to prevent full production, as I understand the testimony. On exploration there are little things you can do to slow things up and modify, but essentially once the lease goes forward economic and technological forces take over, with minor chances to modify those forces through various orders.

Now, there are two aspects of that. One is the extent to which as a matter of Congressional intention and statement the Secretary ought to hold off until he does have some coastal management plans.

Bearing on that I suppose are the speed with which those plans are being formulated and the fact that Congress was aware of the sequence of events and could have, as it did in Alaska, either cut through and say, "You can go ahead and lease," or "You shouldn't go ahead and lease until they have had an opportunity to plan."

The situation, so far as Congressional intent, is fairly ambiguous.

There is a second aspect of it, however, and that is the extent to which the coastal management plans will affect the assumptions made by the Secretary, and it's obvious from my questioning, one of the matters of concern to me was the use of tankers against pipelines in a large strike situation. Conceivably pipelines may be forbidden or so hinged with restrictions that they won't be available. Now, that seems to me possibly, at least arguably, to so change the basic assumptions with respect to the impact statements' evaluation of possible environmental damage as to require a re-thinking by the Secretary. Now, he might reach the same decision, but scattered throughout these documents are references to the desirability of using oil lines instead of tankers. My recollection was that that was also true

of the Programmatic impact statement, and also of the PDOD.

My recollection is that it needs to be refreshed on the Programmatic PDOD and the sale 40 PDOD. The point, as I recall, was made, and it was striking to me when I first saw it, that the environmental impact might be reduced if these strikes offshore were large enough because tankers might cause more spill than production offshore and piping the material in.

It's not a serious problem with respect to gas because, as the statements made clear, the gas is to a large extent non-polluting even in case of a break. It will burn off or be dispelled, although there may be some hydrocarbons in the lines and some water in the lines. But it's a serious problem as to the oil.

Now, then, with respect to NEPA, it's obvious that has been very substantially tried here. Part of the problem I think is to what extent a document that is satisfactorily worked out from a scientific point of view is necessary. That is, can the document perhaps have some defects and even errors and yet in general be sufficiently in compliance so that a reasonable, non-specialized administrator can reach a

basic decisions are not made on environment, but they are made on these other factors: whether people get jobs, whether they can drive their cars at 60 miles an hour, and have Cadillacs instead of Chevettes, and all of these other matters.

I understand the position. You have made it clear. Mr. Like has made it clear. Nassau has made it clear. Everybody has made it clear. But I am not going to decide it on that ground. There's no point in arguing it.

MR. ZEDRONSEN: Your Honor, in cases like the so-called Cosmo case that I mentioned before, we were dealing also with energy. We were also dealing with the way people live. We are talking about the production, let's say, of electric power through nuclear means. And yet, that didn't prevent NEPA from being enforced. The Court didn't say there, well, you know, the head of the Nuclear Regulatory Commission is an intelligent man and he's aware of the political problems.

THE COURT: I think you have to address yourself to the question of whether the environmental aspects were fully laid out and considered. The direct environmental aspects.

MR. REDROBER: All right. Well —

THE COURT: I would like, since you are a representative of the State of New York, to know, for example, that New York State has a Tidal Wetlands Act that regulates where pipelines can go through and what can be done with respect to on-shore use of the estuaries and of the beaches and landing pipes and other things.

MR. REDROBER: And the Court obviously is aware that we do have a Tidal Wetlands Act which is being enforced rather vigorously.

THE COURT: You have Article 24 of the — Environmental Conservation Law. Is there now in effect in New York a ban on any development in the coastal area?

MR. REDROBER: Well —

THE COURT: Not the coastal areas, but the — in the wetlands.

MR. REDROBER: We are now in what is called the moratorium period. Under the moratorium period, unless you get a hardship permit, which is obviously supposed to be granted only under limited circumstances, you cannot alter the state of — either a wetlands or an adjacent area thereto. The

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adjacent area has been defined by regulation. In the process now are proposed permanent regulations which would set forth what you may or may not do on particular kinds of wetlands. And the wetlands are broken down by type.

THE COURT: Might that affect whether a pipeline can run into New York?

MR. ZEDROSSER: It surely could. Because I could think of a more obvious alternative, if you will, in a wetlands.

THE COURT: And does Article 23 dealing with minimal resources contain detailed definitions of oil and pools and gas and make this a part of the total scheme of regulations?

MR. ZEDROSSER: Your Honor, there is no question but that the State of New York through its Legislature has given strong recognition to the importance of our coastal areas.

THE COURT: Is there, in your opinion, a sufficient indication in the various impact statements that the Secretary was aware of the fact that he could not make these decisions without getting in effect directly or indirectly the consent of the State of New York to run pipelines through?

A 815

MR. REDROBBER: Your Honor, I think there was insufficient -- clearly an insufficient recognition of this. And I think the point made by the Court in -- during the hearing was a particularly acute one. And that is, what would happen if pipelines are simply prohibited? Let's take the easiest case.

THE COURT: Is that a possibility under New York State law?

MR. REDROBBER: Yes.

THE COURT: Is that considered in the statement adequately, in your opinion?

MR. REDROBBER: I do not think so, your Honor.

THE COURT: Is it your contention, representing the State of New York, that there haven't been adequate considerations of the effect of the various present statutes on the total program of the federal government and its impact possibly on the environment?

MR. REDROBBER: Yes, your Honor. I think there has not been such consideration. I think the general impression that a fair reader, including the decision-maker, would get from reading these documents is that the juggernaut will roll along.

THE COURT: Can anybody reading these

documents have an understanding of the complexity and the range of the State of New York statutes controlling this area.

MR. SEDROSER: Well, I don't think so. I think, for example, there is an awful lot going on in the -- just in the tidal wetlands area, for example. The regulations -- the permanent regulations now in process are going to be tough. As for the moratorium, obviously, that is tough. And this is being taken very seriously. Indeed, there were hearings throughout the state regarding these regulations. There was a lot to be known in there.

THE COURT: The hearing is over and these regulations as they affect Nassau -- and I will take judicial notice of that. It was in all of the newspapers.

MR. SEDROSER: Because our Bureau is involved in enforcing in the courts these particular regulations. And I can attest from my own experience that this is something that we are taking seriously.

THE COURT: Is this a lot of paperwork? A lot of statutory facade that we are dealing with or is New York serious about exercising its sound control over the three-mile seabed and the wetlands?

MR. REDROBERT: Your Honor, there is no doubt that we are serious. There have been attacks on the statute. We are defending them. We have prevailed up until this time. The courts have upheld the statute. There has been a clear recognition by the Legislature, by us, for example, as enforcers, and by the Department of Environmental Conservation and by the courts that this is something of significance to the State.

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THE COURT: This is, I take it, in your submission, a matter independent of the coastal zone management act since it depends upon the state's inherent sovereignty and has nothing to do with federal approval.

MR. ZEDROSSER: Absolutely. It doesn't depend on the approval of any -- of anything by the federal government.

THE COURT: All right. Could you bring your argument to a close. I find it interesting to listen to you, but I'm going to be giving everybody a chance. But I have read your brief which was very good.

MR. ZEDROSSER: Your Honor, I would close, I guess, by simply saying that this decision was one that was conceived before and during the embargo of 1974. It was rationalized afterwards. And I would agree with Mr. Like about his statements on the lack of consideration. And in many ways events have caught up with the Secretary. I think the times are changing. Nevertheless, the Secretary continued ahead in the straight line undaunted, unswerving, and he is going to h[illegible] his lease sale no matter what. Now, that might be tolerable if it weren't illegal. We claim it is. Not only does it violate NEPA, it's going

to run afoul of precisely the elements that the Court has been pointing out, namely, the admitted powers of the state.

THE COURT: I haven't pointed out anything. I am trying to get your position.

MR. ZUBROWSKI: Yes. Well, our position on this is clear, that the State of New York can regulate and is regulating now what happens to its vital coastal areas. And the tidal wetlands law, among others, is a key part of that regulation.

Essentially, what the federal government is trying to do is present to the states a fait accompli and say you are going to have a lease sale. Now, what are you going to do about it?

And as the Court has pointed out, this could backfire. Because if the states do what they can do, at least with the current moratorium would suggest, and that you cannot have any pipelines, the effect could be very different than those which are assumed in the impact statement.

Your Honor, we maintain that we have shown a likelihood of success on the merits and demonstrated possible irreparable harm.

I understand, your Honor, that exploration is

likely to begin relatively soon after leasing. EPA tells me that at least one oil company has already approached them for an effluent permit and there hasn't been a sale there yet. So I think there is an imminence. And I think we have demonstrated our case for a preliminary injunction.

THE COURT: All right, thankyou very much.

MR. KAUFMAN: I think your Honor has demonstrated, in answer to the question that you had asked the other day, about whether or not this is a charade or whether or not major federal agencies and major federal actions are subject to NEPA as against the policy considerations that are being made. I think you demonstrated your familiarity with the cases that hold that the agencies are all very definitely subject to NEPA. And in particular, the Department of Interior and the Pentagon.

I do wish to point out to your Honor that particularly where a presidential directive is involved, where agencies tend to minimize the application of NEPA, is just exactly what your Honor has been talking about this morning. It's been recognized in both the AEC and the other cases that NEPA's process is subject to very careful judicial

Now, one concern which the Court raised at the close of the hearing, which has been repeated again here this morning in the colloquy with counsel, is the concern that in some way the states might because of their own particular desires not to have pipelines run on shore impose some restriction or limit on these pipelines, either pursuant to their tidal wetlands authority or some other state zoning or regulatory statute, and that this would result in a very serious environmental consequence of having most or all of this oil shipped in by tankers.

And I don't think there is any doubt or any dispute that the tankers in terms of oil spill probability pose a much more severe risk. But I think that this particular problem was contemplated by the EIS, the Sale 40 EIS, and was specifically addressed in that Sale 40 EIS.

In fact at page 17 of Volume 2 the EIS explains certain facts which would hinder or prohibit the use of pipelines in the mid-Atlantic area, and one of those facts, which is unequivocally stated there, is responsivity of state and local jurisdiction along the mid-Atlantic Coast to the approval of additional landfalls that would be needed.

And in other sections of the EIS there is extensive discussion of the various state statutory authorities, whether it be tidal wetlands acts or anything else, they do it individually state by state, for the state of Maryland and the state of New Jersey, and they recognize that that is a problem, that any decision that will ultimately be made as to pipelines in their location will have to be done with the consent and approval of the states.

THE COURT: Well, aside from that passing reference that you first quoted, where else do they say that the states under their laws may well prevent or regulate the point of landfall?

MR. [illegible]: Well, it's mentioned in the context of the discussion of the tidal wetlands statutes which the various states have, and this appears, the discussion appears in Volume I, I believe, at pages 51 and 52. There is some reference to it.

But in addition in the discussion of the Coastal Zone Management Act -- and I think this is critical -- the purpose of that act as originally set out was an attempt was to address this problem, that is to practically encourage the states to plan for these coastal developments. And it's a

requirement of that act previously -- and now with the amendments it's been made specific as to OCS activities -- that the states plan to accept such facilities. In fact the regulations promulgated under the original 1972 act, and which are published -- I have a Federal Register citation, I can provide these to the Court; I think they are published at 15 CFR Section 923.14 and .15 -- specifically set out in a chart the kinds of activities which the states must plan for in their Coastal Zone Management Plans if they are to receive continued Federal funding to conduct this activity, and listed there are energy production and transmission, oil and gas well storage, distribution facilities, refineries.

THE COURT: Yes, but there is nothing in the Act that compels the state to accept any of this.

MR. JENSEN: The Federal Government does not have the power, obviously, to compel the states.

THE COURT: That's right, and there is nothing -- I read the impact statement -- indicating that it draws back to the attention of the Secretary that he couldn't make these decisions unless the states wanted to go along with them.

MR. JENSEN: I don't think that's a fair statement, your Honor. I think there are -

THE COURT: All right, I'd like to know where in the FEIS or where in the Impact Statement except for this passing reference you have just made, there is an indication to him that the states have the power and the statutes and the policies that may prevent --

MR. JENSEN: The EIS goes even further than what your Honor is suggesting. At one point the Environmental Impact Statement actually sets out -- all right, Mr. Hyman has found a reference at page 455 of Volume 2 that says at the bottom of that page, "The wetland legislation in the respective states would require permitting an Environmental Impact Statement for pipelines proposed for construction through the wetlands."

And it goes on: "Several states possess regulations as part of their pollution preventive programs that would require permits and appropriate environmental analyses if proposed pipelines were to cross any watercourse," and then it describes New Jersey and Maryland legislation, and continues in the next vein on page 456.

THE COURT: Is that what you are relying upon as having alerted the Secretary of the Interior to this possibility?

MR. JENSEN: That plus the other references I gave, plus - This point I want to make: At page 32 of Volume 2 appears a table in which the people who prepared this Environmental Impact Statement calculated what the oil spill would be in terms of quantity if all of the oil that would ever be developed from the OCS activity in the Mid-Atlantic were to be shipped into the Coast via tankers exclusively. Those figures are set out, there is a quantification of the specific amount of oil spill harm that can be expected if that contingency should result.

THE COURT: I know, but the whole thrust of the EIS and PROD is that they are going to use pipelines if there is a major strike. In fact wasn't it the Army Engineers' letter which said that it's unrealistic to have these oil spill figures in because if it's a big strike you are going to use pipelines?

MR. JENSEN: Your Honor, I don't think that anyone can quarrel with that observation. It is realistic to expect that pipelines will be used because pipelines in this context are the most environmentally desired device. You would have to think of a scenario in which the states would

else."

MR. JENSEN: Well, but the point is that if the states are to receive this Federal largess under the Coastal Zone Management Act they have to plan for the facilities. They have to plan and they have to develop.

THE COURT: The planning for facilities means planning for no facilities too, because they can come up and say, "We don't want your stuff, take it away."

MR. JENSEN: Well --

THE COURT: That's a plan.

MR. JENSEN: No, but they can't do that under the Coastal Zone Management Planning Act.

THE COURT: I'd like to see where they say that, when it's perfectly clear to me from the legislative history that no compulsion should be put upon the states one way or another. It's supposed to be a free exercise in cooperation.

MR. JENSEN: Well, I call your Honor's --

THE COURT: I forget where it is, but in one of the references there was a reference to no sanctions, or something like that, by the Secretary on the individual states. Is it in the Act or the --

Coastal Zone Management Act would not interfere with this new expansion --;

THE COURT: Well, I think Congress understood this problem. But I didn't get the impression, and I may be entirely wrong on it -- I will reread the reference here -- that the EIS or PROD brought to the Secretary's attention the major role that the states had.

MR. JENSEN: I think if you read the document you will find that it is contained in the --

THE COURT: I have read the documents but I will happy to reread them.

MR. JENSEN: I really think that it has to be viewed in the context of the Coastal Zone Management Act because that Act clearly conceives of, contemplates this problem, attempts to address it, attempts to encourage the state within itself --

THE COURT: Yes. It attempts to sweet talk the states into going along, but the states have their own mind and may very well decide not to go along.

And it is not wholly unrealistic. We have had this happen all over the country. The states tell the federal authorities to go with your money

THE COURT: I have serious doubt about whether you -- about what you are saying is true -- or whether Congress intended that because the problem that in effect permitted the Secretary of the Interior to tell the Government and the state legislatures that they couldn't control their own lands would really have a greater deal of probity in reflecting --

MR. JONES: Well, that is a legal problem. The Federal Government cannot obviously tell them what to do. The state itself --

THE COURT: The Act makes funds contingent on the states giving up their power to keep all of this out if they wanted to --

MR. JONES: Section 305(c)? of the original Act provides and I am reading now, " ..prior to granting approval of a management program submitted by a coastal state, the Secretary shall find that the management program provides for adequate consideration of the national interest involved in the siting of facilities necessary to meet requirements which are other than local in nature..."

When the regulation says on --

THE COURT: But they can consider it. They can consider the national interest. We consider all

of these matters and we prefer that we use Jones Beach for swimming and not to run an oil line on it.

MR. JENSEN: But the regulation contemplates that. These requirements should not be construed as compelling the state to --

THE COURT: Exactly

MR. JENSEN: -- to accommodate certain facilities.

THE COURT: That is exactly what I had in mind. I believe that the history is quite clear. The states can block this completely. And at the moment, as I understand the representative of the State of New York, the State of New York has said as of this date you can't do any of this.

MR. JENSEN: No --

THE COURT: Without any special permit showing a hardship. Is that the position of the State?

MR. [illegible]: They certainly can't do it on Title II, your Honor.

THE COURT: Well, Title II does it include the Shinnecock Indian area?

MR. [illegible]: No, I don't think it would. There is other legislation, however, which gives the Department of Environmental Conservation the power

A 830

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MR. JENSEN: Mr. Hyman again has pointed out another reference in Volume 2, Page 463, where there is a discussion of the possibility of the shipping of the oil resulting from inability to be able to lay pipelines.

THE COURT: Well, I will be very happy to read all those references.

MR. JENSEN: But the point is -- I guess the point I am trying to make is the extent to which the EIS has to discuss this particular subject is determined by in part the virtual impossibility of doing much more. I mean, it is a problem. The statement recognizes that it's a problem. But how significant would it be to speculate about these areas. There is nothing that can be done about them. It is being done. Whatever can be done hopefully is being done.

THE COURT: As long as it clearly follows in a meaningful way and in the forceful way in the documents. Now, you can't take a set of documents that are six feet high and just slip in an occasional word here or there and say, this covers it. If you are right and there is a realistic statement of what is involved here, that is one thing. But that tells me the issue.

Oh, no. Section 1314B. I am sorry. A and B. They specifically provide for this right of condemnation which I have been referring to.

And I think further evidence of the fact that the Secretary was aware of this problem is that the lease stipulation number 4, the one that talks about whether or not pipeline right-of-ways can be determined -- and it specifically says not only -- and this language, of course, was quoted at length throughout the proceedings. The pipelines have to be technically and economically feasible. But it says that if the pipeline right-of-way can be determined and obtained.

So in drafting that stipulation to apply to this lease, the Secretary and his delegates had in mind the possibility that one of the reasons the pipelines may not be used, even though the thrust of the stipulation is to use them wherever possible, is that pipeline right-of-ways could not be obtained. There is stipulation number 4 in the lease stipulation.

(Continued next page.)

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A 832

not permit pipeline landing. And I think in that regard stipulation 4 is particularly revealing because it shows that it was put into the lease, this possibility; that the Secretary was not even going to require the oil companies to do the impossible. That is, to use pipelines if the state and local government said they couldn't. And the consequence of that, the tanking and the oil spill is contained in the statements and in quite some detail.

THE COURT: Thank you very much. Your brief was very helpful.

MR. BRUCE: Your Honor, my name is Edward Bruce and I represent the intervening defendant, National Ocean Industries Association.

In the brief that we filed in connection with the post-hearing aspect of the case, we tried to address ourselves at some length to the concerns that have been voiced here in the interrogation of the government --

THE COURT: Yes. I read your brief. It's very helpful. You got it to me yesterday, as I recall.

MR. BRUCE: I did.

THE COURT: I appreciated that.

MR. BRUCE: You raised these problems in a way--

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on Friday -- in a way that I certainly hadn't thought sharply about them during the hearing. The trial was devoted largely to the effects of one kind of fish or another kind, and other technical and scientific issues of that sort.

I spent all day yesterday, Saturday, and Sunday, going through the EIS trying to find out what it says about this kind of problem because I hadn't gone through it with that focus before. And we put into our brief everything which it did say. We didn't quote everything because we didn't have the room. But I was surprised -- pleasantly surprised that the very kind of roadblock -- whatever you want to call it -- veto, confrontation, that your Honor had raised asa possibility was specifically addressed in detail in the EIS itself.

Page 20, 21 of Volume 2, there is a statement that maybe it won't be possible to use pipelines. Maybe tankers will have to be used. And among the reasons in addition to the technical ones that were recited in testimony -- and I think that you heard the very reason of state authorization of land use, state regulations of land use was specifically identified.

After that at pages 30 to 33 of Volume 2, there

was an analysis of what would happen, what if -- I think one of the witnesses used that phrase, what if tankers had to be used. And it was analyzed in detail.

Now, I thought in the light of what seemed to be the relatively remote possibility of this unyielding confrontation between state and federal government that was -- you know, that was beyond the realm of what the rule of reason requires in looking at all the possibilities that a development might take place. I don't understand that. And we put this in our brief. And I won't quote the pages to you because you have it.

Repeatedly there are qualifications about pipelines. They talk about minimization of tankers, if pipelines are used, to transport OCS oil, et cetera, et cetera.

I don't believe, your Honor, that anybody could have come away from a reading of that EIS with a misapprehension of what -- about what the Secretary and the decision-makers in the Interior were told about this kind of possibility of some state -- the state of New Jersey, perhaps, Delaware, what have you, taking the position that we simply won't allow pipelines. The matter was specifically addressed.

Now, I don't understand that. There are many, many citations in Volumes 1, 2 and 3 of the EIS about general state control of land use. I have them here. But it doesn't make much point in reading them into the record. But by casual glance I think there are about 10 parts of the EIS where that part is addressed. The same matter is addressed, of course, in less detail, but it is addressed in general ways in the PDOD for Sale 40.

So as to the contentions that have been raised here, that this was done in ignorance of this possible problem, I just don't think the record will support that.

Now, I would like to make some other observations. You have had a statement -- of course, it was under leading cross-examination almost from your Honor to the State of NEw York about what their statute means, about what the State of New York is going to do, et cetera, et cetera.

I reviewed before the oral argument the State of New York comments on the draft EIS. I reviewed the comments of New Jersey and the State of Maryland and the State of Delaware and the State of Virginia. There is not a single state -- certainly not New York --

you.

All right. I am sorry. I didn't expect the argument to go so long. It's perfectly all right. You can go as long as you like. I have all the time.

MR. BRUCE: In Volume 3 of the EIS, Page 32, the comments were made during the draft of -- well, you used certain assumptions about where you are going to run the pipelines and how could you have made the assumption when you didn't know -- you know, what the local zoning, et cetera, would presently be. The EIS responded to that and they said, we made certain assumptions. But those were only general assumptions. Where it may come ashore, it dealt with that problem.

Well, again, we have recited in our brief all the citations. I find them impressive. We have a rule of reason operating here and I think everybody concedes that. The Secretary looked at reasonable inference alternatives. And not even in the action of the NRC against Morton, the case the plaintiffs recite, and they said he doesn't have to consider that if you repeal the anti-trust laws. And under the light of what was told to him about the state's posture, under the analysis of the state's regulatory scheme, it seems to me it was ample.

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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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A 838

A No.

Q Please turn to the May 3rd minutes.

A May 3: Myself, Judy Gresham, Elaine Gloch, Barbara Karlen, Dan Patton and Diane Moss, as recorder.

Q Was there a discussion of the environmental statement or Program Decision Option Document?

A "Judy reported that if everything goes well, the Sale 40 should take place in mid-August. June 14th will be the week of mock sale, and that it was expected that Lionel from New Orleans and Lyle McCauley from Denver would be coming to the office as close to that sale as possible to assist us.

"At the mock sale, Frank will open the bids and the entire sale procedure will be enacted so as to insure that everything works correctly. As part of the training for the sale, Judy will give a presentation to explain what a sale is, and her staff is preparing a pamphlet for staff members with instructions on how to code.

"Carl Pavetto will be coming up from Washington to discuss the PDOD which should be completed in the same week as the impact statement. Frank noted that since there are very few options from which to make choices, it shouldbe relatively easy to have these

A 839

A I do not know.

Q Will you check, please?

A Yes.

Q Will you please refer to the minutes of May 17, 1976.

A There were present myself, Judy Gresham, Barbara Karlen, Dan Patton and Diane Moss, as recorder.

Q Was there a discussion of environmental statement or Program Decision Option Document?

A "~~Warren~~ Lorer is working on his input for the PDOD. A discussion of stipulations ensued. State should be informed of possible onshore impacts during the various stages of exploration and development, and specific states should be indicated as to the particular impact their areas might receive.

"~~Jean~~ Gene Herron is developing stipulations which may be incorporated into the OCS orders. We will submit stipulations to Washington and they will decide between which ones should be stipulations and which should be orders.

"Frank said that stipulations will probably be submitted with the designation that they may be made orders at a later date.

"Dan reported on the progress of the stipulation section on cultural resources. There is a plan under

A 640

Q VIMS?

A None.

Q Marine study plan?

A None.

Q Resource estimates?

A None.

Q Industry inputs?

A None.

Q Oil spill trajectory?

A None.

Q Risk analysis?

A No.

Q Would you please go to the minutes of June 7th.

A Present were myself, Elaine Gloch, Judy Gresham, Barbara Kalen, Abby Miller, Diane Moss, as recorder.

Q Was there a discussion of environmental statement of PDOD?

A "The EIS are going quickly. And the expectation is that we will be down to about 100 copies by Tuesday. Monday through Wednesday will be priority mail-out days for the final environmental statement for No. 40, and no xeroxing will be done by Jerry during that period.

"Judy discussed plans for the mock sale which

would take place Tuesday morning, June 15 starting at 9 a.m. in the Secret Service Conference Room, 625. Abby asked whether everyone will have assignments for the mock sale and Judy said there will be assignments for everyone with the exception of Arline and Jerry who will stay in the office to answer telephone calls. For the actual sale day we will need to have some staff people remain in the office.

"It was noted that we had requested use of 625 for future use but Secret Service was unable to promise it to us especially for the period August 16 to 18, as they might have to place some of their overflow of new people in that room in the event that some of the tenants who are supposed to vacate their offices on the 6th floor are still occupying the space needed by Secret Service.

"With reference to the visuals for Sale No. 40, there is approximately in excess of 300 sets and they will be sold at the unit price of $5, and orders will be handled through Jean Upshaw.

"A meeting with the Corps of Engineers was scheduled to take place in the afternoon to discuss the timing of requests, etc., permanent applications which they could expect to result in the potential

issuance of a sale notice and successful holding of a sale".

Q There is reference to reserving space for an actual sale between August 16 and August 18, is that correct?

A "Noted we had requested use of 625 for future use but Secret Service was unable to promise it to us, especially for the period of August 16th to 18th."

Q Did somebody from your office or Washington, if you know, ask Secret Service whether or not their space would be available for the conduct of an actual sale during the period August 16 to August 18?

A No one from this office asked Secret Service if their space would be available for the conduct of an actual sale. We had previously mentioned that the anticipated sale date was sometime in mid-August, based upon the procedures. Because of historical precedent, that method would be based upon procedures and we had to go through either the 17th or the 24th of August.

We had requested, because we have a requirement for additional people to come in and work if we have a sale and we obviously don't have very much space here, we need additional room.

Q Who contacted the Secret Service with respect to the availability of their space during the period August 16th

to 18th?

A My administrative officer.

Q Who is that?

A Elaine Gloch.

Q With whom did she speak in the Secret Service?

A I have no idea.

Q When did Elaine Gloch speak to somebody at Secret Service with regard to the availability of their space during the period August 16 to 18 for an actual sale?

A Again, I didn't say anything about an actual sale. We were talking about planning dates still, at that time.

MR. LIKE: I will withdraw that question and will ask the question in another way.

Q Did Elaine Gloch have a conversation with somebody at Secret Service with respect to the availability of Secret Service space?

A I asked her to request from Secret Service space and get an indication from them when it might be available. The planning dates at that time were the 16th to 18th and the 23rd through the 25th.

Q Did you tell her to ask them whether there would be space available for dates August 16th through 18th and August 23 through 24?

A That was done within a time period we had considered.

Q When did you tell her this?

A Sometime prior to June7.

Q Prior to June 7, 1976?

A Yes.

Q How long prior to June 7, 1976 did you ask her to make that inquiry?

A I have no recollection of that.

Q Did you have a conversation with anybody in Washington with respect to arranging for space?

A No, I didn't.

Q During those dates?

A No, I did not.

Q Where did you get those dates of August 16th through the 18th?

A Based upon the procedures.

Q Tell me now what procedure gave you the calculation --

A The procedures at the Bureau --

Q Let me finish my question.

Tell me how you calculated that the period August 16th through 18th, or August 23 through 24, were the dates that you should reserve space for?

A The final statement was filed on May 26th, 1976.

Q We are talking now about a date prior to June 7? Right?

A 845

A I am talking about May 26th, which is prior to June 7. The statement was filed on May 26th. It has to be on file a minimum of 20 days, which would put it to June 26th. There is generally a period of some two weeks between the actual time that the Secretary can make a decision and when he can announce. That puts it some time in the middle of July for the issuance of the sale notice. That means that sometime in mid-August, either because of the history of the program sales being always held on a Tuesday, it is down to two Tuesdays in August; that would be August 17 and August 24. On sheer speculation because we have a severe lack of space, we had to inquire as to whether we could get that space. Since we couldn't get that space we also looked to see if we could get space from the Port Authority.

Q As of June 7, 1976, had the Secretary made a decision to hold the sale?

A I have no knowledge of that. To my knowledge he did not.

Q To your knowledge he did not?

A He did not.

Q You testified earlier that your office prepared a draft notice of sale. Do you recall when that draft notice of sale was prepared?

A 846

A I am talking about May 26th, which is prior to June 7. The statement was filed on May 26th. It has to be on file a minimum of 20 days, which would put it to June 26th. There is generally a period of some two weeks between the actual time that the Secretary can make a decision and when he can announce. That puts it some time in the middle of July for the issuance of the sale notice. That means that sometime in mid-August, either because of the history of the program sales being always held on a Tuesday, it is down to two Tuesdays in August; that would be August 17 and August 24. On sheer speculation because we have a severe lack of space, we had to inquire as to whether we could get that space. Since we couldn't get that space we also looked to see if we could get space from the Port Authority.

Q As of June 7, 1976, had the Secretary made a decision to hold the sale?

A I have no knowledge of that. To my knowledge he did not.

Q To your knowledge he did not?

A He did not.

Q You testified earlier that your office prepared a draft notice of sale. Do you recall when that draft notice of sale was prepared?

A 847

A I don't remember the specific date.

Q Was it prepared before June 7?

A "This draft sale notice shall be ready by June 1"

Q Does that indicate that the draft notice of sale was in preparation before June 1?

A Yes, it does. If it is true --

Q If what is true?

A If it is true it was in preparation before June 1. All that it indicates is that on the assumption or the possibility that the Secretary may decide to hold a sale, these things are required. There are a number of detailed legal requirements that require a considerable amount of review time. It doesn't presume that the Secretary is making a decision.

Q Do you recall whether in fact a draft notice of sale was prepared before June 1 and, in fact, sent to Washington, D. C. by your office before June 1?

A I don't know.

Q Did you ever see a draft notice of sale prepared in this office?

A I don't remember.

Q Do you recall that you yourself sent a draft notice of sale to the Assistant Director of Mineral Management on May 28th?

A 848

A I don't recall it but that doesn't mean that I didn't do it.

Q Do you have a file in which that draft notice of sale would be located?

A Do I have a file?

Q Is there a file in this office which would contain the draft notice of sale if in fact one was prepared?

A There should be a file in this office that includes it.

Q I will tell you now that the law students --

MR. HYMAN: Don't tell us anything.

MR. LIKE: We don't have it. The law students have indicated that there was in the file a draft notice of sale sent to the Assistant Director of Minerals Management from the manager of the New York OCS office on May 28th.

Q I will just ask you to verify that.

A Okay. If it is in the file, all right.

Q Do you recall whether the notice of sale contained a date for the sale?

A No, I don't.

Q Do you know what file it would be in?

A No, I don't.

MR. LIKE: We will take a recess.

(Recess was taken.)

A 849

(The deposition reconvened at 9:10 o'clock p.m.)

BY MR. LIKE: (Continued)

Q With regard to the minutes of June 7, was there any discussion of RFP's?

A No.

Q VIMS contract?

A No.

Q Resource estimates?

A No.

Q Industry inputs?

A No.

Q Oil spill trajectory?

A No.

Q Risk analysis?

A No.

Q Baseline studies?

A No.

Q Marine study?

A No. In May we received a planning schedule for the proposed OCS lease Sale No. 40. "Enclosed is a list of your proposed planning dates for the preparation of the PDOD and notice of sale for propose Lease Sale No. 40, etc."

The final paragraph, "The above dates represent

the latest time each component must be complete if galleys are to be read and corrected and the 8-24-76 sale date is to be met."

It gives the proposed sale date at that time as 8-24-76.

"Draft PDOD complete May 25, 1976; draft notice of sale from field office to Washington office, June 1, 1976. Provide copies of the draft notice of sale to GS, Fish and Wildlife Service, National Park Service, Assistant Secretary for Land and Water Resource, Assistant Secretary Program Development Budget, Solicitor, etc.

"June 7, 1976, brief Assistant Secretary on PDOD options by June 11, 1976. Earliest legal decision date 30 days after FEIS publication, June 25, 1976. Final PDOD to Department, June 18, 1976.

"Tentative secretarial decision on option for sale notice final decision is made when sale notice is signed. This is necessary in order to complete the preparation of sale notice for the selected option and include all steps outlined below June 28, 1976. The input to notice on selected option from all offices must be submitted to BLM by July 2, 1976. (Geological Survey, Fish and Wildlife Service, National Park

A (Continuing) Pursuant to Exhibit 21 so marked and instruction included therein relating to the planning dates and possible exploration stipulation for proposed Lease Sale No. 40 which identifies a target date of having the draft notice of sale from the field office to Washington on June 1, 1975, we transmitted it on May 28th.

MR. LIKE: I would like to also mark for identification another document which was found in the files here appearing to be a teletype and containing a memorandum or what appears to be the text of a memorandum dated September 18, 1974, to Director, Geological Survey, to Assistant Secretary, Energy and Minerals, from Jared G. Carter, Deputy Undersecretary; Subject: OCS Leasing Schedule, which reads as follows:

"Prior to the meeting of the OCS Research Management Advisory Board on October 3 and 4, the Undersecretary wants a firm leasing schedule laid out that definitely includes the following items:

1. 10 million acres leased in 1975 - not just 10 million acres offered.

2. A sale in 1975 in both Alaska and the Atlantic.

3. An alternative if No. 2 fails which

will still allow leasing of 10 million acres.

On the same time schedule the Undersecretary wants a plan for a lease sale on the Atlantic in 1975 that would include some leases in all of the promising areas of the Atlantic rather than just the sale limited to Baltimore Canyon.

It is the responsibility of BLM to complete their response to the Undersecretary by no later than C.O.D. on September 30th; cc Undersecretary Whitaker, Darius Gaskins, Fred Ferguson, Frank Clarke.

(The above described document was marked Plaintiff's Exhibit 24 for Identification.)

Q Mr. Basile, were you aware of the exitence of that memorandum before my reading it to you now?

A I heard that memorandum read.

Q By whom?

A By Guy Martin, who was a member at that time, and I don't remember the exact time, but who was the representative of the State of Alaska on the OCS, what used to be the OCS Steering Committee in Washington.

MR. HYMAN: You didn't read the whole memorandum did you?

A 853

MR. LIKE: Of course not.

MR. HYMAN: I want to read the whole memorandum at this point, if I may.

MR. LIKE: I marked it for Identification.

MR. HYMAN: You did.

MR. LIKE: Read the whole memorandum, I don't care.

MR. PICCIANO: It is marked.

MR. HYMAN: He read his part to the witness and I want the witness to read the whole memorandum from here out loud so it refreshes his recollection, including this part that "no decisions have been made to the frontier and there is nothing firm on these points".

MR. LIKE: Before he does that, let him finish where he heard it read.

MR. HYMAN: You heard the whole thing read?

THE WITNESS: No. The only thing I heard read was the part that Mr. Like read.

MR. LIKE: Let him answer the question and then if you want to have him put the rest of it in, I have no objection to that.

MR. HYMAN: You remember that somebody read just a portion?

A 854

THE WITNESS: I remember Guy Martin was the guy, this was just his thing of reading the memos he supposedly wasn't supposed to have.

MR. HYMAN: Don't answer the question. I want you to read the whole memorandum.

MR. LIKE: Off the record, please.

(Discussion held off the record.)

MR. LIKE: On the record, please.

A I heard this memo read once before by Guy Martin, who is the representative from the State of Alaska to the OCS Advisory Committee.

Q When did you hear it read?

A It was in a meeting of the OCS Advisory Committee. I don't remember when. It was obviously --

MR. HYMAN: Do you know about what year?

THE WITNESS: It was a while ago.

Q Was it in 1974?

A I really don't remember. It was obviously some time after the memo itself was written since he did read it.

Q Do you recall what he read aloud was substantially the same or identical to what you have in the exhibit before you and what was read aloud into the record?

A I don't remember if it was exactly what you read aloud, but it was similar.

Q Was it substantially similar? A 855

A Again, I don't have a photographic memory.

Q Was it substantially similar to what you heard?

A It is essentially what I heard him read.

MR. HYMAN: Did this come out of your files?

MR. PICCIANO: Yes.

MR. HYMAN: Do you know what file it came out of?

MR. JENSEN: Do you know if such a memo exists in fact, of your own knowledge?

THE WITNESS: Again, other than the fact that I heard it read, I have never seen that memo, to my knowledge.

MR. HYMAN: Did you ever act under this memorandum?

THE WITNESS: No.

Q Did Mr. Martin state where he had obtained the memorandum?

A No, he did not.

Q Or how he had obtained it?

A No, he did not. He just said, "I have here a memorandum that I will read to you."

Q Had you ever heard anybody from the Interior Department

A 856

state that this memorandum was not authentic?

MR. HYMAN: Did you have any discussions with anyone about it?

THE WITNESS: I never had any discussions with anyone about it.

Q You have no independent knowledge of whether it is authentic or not authentic?

A No, I don't.

MR. HYMAN: Do you know what file it came out of? There is no indication of where you got it?

MR. PECCIANO: Off the record, please.

(Discussion held off the record.)

MR. HYMAN: There is a notation "Teletype after Carter memo is not part of the memo".

MR. JENSEN: Neither is the black underlining on the lower portion of the first memo.

MR. HYMAN: Read the rest of it.

A "For response to queries about Washington Post article by George Wilson concerning Jared Carter memo to BLM and the Geological Survey (9-18-74), Mr. Carter's memorandum is simply a request for recommendation containing the best thinking of officials of the two bureaus concerned for the purpose of planning. It emphatically does not commit the Department of the

Interior to a definite course of action. For purposes of background it is important to note that the Department has been publicly committed for many months to the idea of leasing 10 million acres of outer continental shelf lands during 1975 and to the idea of leasing areas on the Atlantic and Gulf of Alaska, if and when it becomes feasible. But there has been no decision made as to what frontier "new" areas should be offered for leasing during 1975. Interior is in the process of making that decision. The memo from Mr. Carter is a part of that process. Under-secretary Whitaker has not made a decision on these points. Even after such a decision, the following steps are required by law, the National Environmental Policy Act of 1969:

1. Interior must evaluate the environmental impacts of each proposed lease sale area in detail.

2. It must publish its finding in a draft environmental impact statement to be filed with the Council on Environmental Quality, announced and distributed publicly for scrutiny and analysis.

3. It will or will not specifically require by the National Environmental Policy Act to do so hold public hearings on each draft environmental impact

A 858

statement.

4. It then must analyze all oral and written comments submitted and write a final environmental impact statement which also must be filed with CEQ with copies made available to the public.

5. It then must wait at least 30 days before making a firm final decision to offer for sale the area under study or any part of the area. The announcement must be made publicly and published in the Federal Register.

6. At least 30 more days must elapse before the sale is held.

7. And finally, the industry is not required to bid on any of the leases offered and the government is not required to accept any of the bids.

In addition to the steps listed above, the Department will make no decision to conduct leasing on the Atlantic OCS until the state-federal jurisdictional dispute is resolved with respect to federal leasing. The Special Master has submitted his recommendations to the Supreme Court. However, the Court has not yet taken final action in the case. Even after an area is placed under lease, the government does not lose control over it. Detailed plans for

development must be approved by the Geological Survey before any development can commence and Geological Survey supervisors and inspectors monitor every phase of development. They are empowered to shut down operations on any lease at any time and they have done so on a number of occasions when public safety and public resources were in their judgment in jeopardy.

Further, the Secretary of the Interior can halt development indefinitely in a leased area, as the Secretary of the Interior did in Santa Barbara after the 1969 blowout there. Some of these leases are still blocked to development".

MR. HYMAN: We still don't accept that that came out of our files unless you tell me what file that came out of. I don't doubt your word, but I would like to know that it is here. Will you let one of your law students let us know?

MR. PICCIANO: Yes.

Q Do you want to turn now to the June 28th minutes?

A There were present myself, Judy Gresham, Elaine Gloch, Barbara Karlen, Dan Patton and Diane Moss was recorder.

Q Was there a discussion of the environmental statement or PDOD?

A "Judy gave a report of the discussions about the

A 860

gical Survey. In many instances BLM got caught in the middle.

The stipulations are part of the sale notice. The slumping bottom one was on the basis of information that Geological Survey had just received.

Q Do you know when the Secretary made his decision to conduct this lease Sale 40?

A Yes, I do.

Q When did he make it?

A June 28th, 1976.

Q How did you get that information?

A I received a phone call from Frank Edward who told me at that time that the Secretary had decided in principle to hold an Atlantic sale but had not decided on a date at that time.

Q And the phone call came to you on June 28th?

A On June 28 in the afternoon.

Q Doyou know when the Secretary decided on the August 17, 1976 date?

A I really don't know. It was some time after the 28th.

Q There is also found in your file a copy of the letter from the Federal Trade Commission, dated March 8th, 1976, to you with the file number in the upper right-hand corner of 3301.5. I show you the letter and ask

A 661

you whether you remember seeing it?

A I remember we had received a copy of it. I personally didn't read it.

Q You never read it?

A No.

Q Is this the first time you are reading it?

A I am not reading it now.

Q You have not read it. Up to date you have not read it?

A I have not read it up to date.

Q Do you know if any member of your staff read it?

A No, I do not.

Q How did it come to your attention that the letter had been received?

A I remember that it came in one morning. My secretary said that there had been a letter received from the Federal Trade Commission. I gave it to Abby Miller assuming that it was a comment, a late comment on the draft statement or the final statement. She came back later and said that it had something to do with the lawsuit and my only disposition of it was, as I remember, to make a copy of it, send the original to Washington to the Solicitor and we hold it on file.

Q Your secretary brought it to you, you saw it, but you didn't read it, is that correct?

A 862

A No, I did not.

Q Did you give it to Abby Miller the same day?

A Yes, I did.

Q Did she report back to you later that she had read it?

A She didn't say whether she had read it or not other than to ascertain that it had something to do with the lawsuit.

Q She returned the letter to you?

A At that time I told her to make a copy of it and send the original to Washington.

Q Do you know whether the original was sent to Washington?

A No, I do not.

Q Is there a transmittal letter in your file or in the files in this office indicating that this document was sent to Washington?

A I do not know.

Q As of this moment you do not know whether this letter or a copy of it was sent to Washington, D. C. ?

A No, I do not.

Q Did you ever receive any communication from anybody in Washington, D. C. concerning this letter?

A Not that I remember.

Q Do you know whether Abby Miller or any other member of your staff received such a communication?

A 863

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There were also some questions you had as to our contact with National Marine Fishery Service and information supplied from their computer banks.

The box is in front of my desk.

MR. HYMAN: The witness is pointing to two big cardboard boxes. The information we received from the National Marine Fishery Service that directly relates to the Mid-Atlantic. There are two other boxes of more general reports that were surveyed by the staff as background and may warrant your inspection. There is in there a copy of the computer print-out from the only active data base bank that the National Marine Fishery Service has operable up to this time.

THE WITNESS: I would just like to read you a run-down of this.

Contact with the NOAA Marine Fishery Service. Statistics landings -- this is the computer read-out. First contact with Mr. Frank Reilly, chief statistician of the Division of Statistics and Market News, Northeast Regional Office, Gloucester, Massachusetts.

Visited him in October and November, 1974. Told him we desired current landings data, pound and value, cash by waters, names and location of fishing units, cooperatives, associations, dealers and

A 865

wholesalers. He told me that all of their data was unavailable other than that already published, and even if it was we would have to pay for it to get it, he didn't tell me who, when, where, why. The data was available and then I saw copies in the library at Gloucester the day before. Anyway, I followed through with a memo to Mr. Reilly and never heard back from him. He never told me where this data was available and who I could go to see to get it.

I pursued it further and ended up with Statistics and Market News in Washington, D.C., Page 2 Building, Whitehaven Avenue, a couple of months later. Contacts there include Mrs. Thelma Bell, Mr. Don Fitzgibbon, Mr. Leslie Robinson. Through them we were able to get a mailing list for publications and computer print-outs. All that was available and the format useful to us and most up to date which in their data base is 1973. For earlier publications we went to Sandy Hook, New Jersey library. They are also there. I have been in contact with them since early 1975. Fishery Economics: contacts, John Rittgers, Mueller, Gloucester, Massachusetts. I met with them in November, 1974 and got information that was available. I called them several times to get

A 866

additional information. They are still developing this part of their program. The only information they had was vessel categories, earnings, et cetera. Marine resource data including ICNAF, International Conference on Northwestern Atlantic Fisheries, contacts, Mr. Bill Gordon, Gloucester; Dr. Brad Brown, Woods Hole; Dr. Marvin Grosslein, Woods Hole; Dr. Richard Hennemuth, Dr. Arthur Merrill, Sandy Hook.

Primary contact for distribution of resource data and current field programs: primarily, MARMAR. Have been in contact with them since October, November, 1974. MARMAR program, which is the primary current resource program, has several problems. A lot of confusion as to what data is available and what form it is in. There are a lot of unworked samples and raw data, National Marine Fishery Service to be able to attest to that, which does not help us at all. There is also an organizational hassle within NMFS which makes it difficult for us to get data. The data base for the Mid-Atlantic was to be transferred and taken over by the Mid-Atlantic Coastal Fisheries Center but it never came about due to lack of funds.

The proposals into BLM now are to develop this data base and work up samples pertaining to this

area. Data that has been generated for this area have been used in case of fisheries, publications are very specific to certain species and result from two to four trawls for long-term assessment purposes, this data does not mean much. If all their samples and raw data were worked up it could mean something. Data that has been generated have been summarized in documents as TRIGOM and URI.

Benthic data: primary contact has been Jack Pierce at Sandy Hook, who was the principal investigator in the area. All the data worked up by his group was given to us and used in the EIS. Again, a lot of samples taken in the Mid-Atlantic area have not been worked up, both Baltimore trough and canyon to be worked up.

MR. HYMAN: When you say "worked up", you mean worked up by them?

THE WITNESS: Yes, subject to payment by us, what Mr. Trusdale referred to in your reference.

Plankton data: contacts, Dr. Marvin Grosslein, Woods Hole; Dr. Robert Marak , Narragannsett. Current data plankton is from samples taken from MARMAP program. Most of the samples still need to be sorted and lots of raw data needs to be worked up and into

A 868

know whether or not there has been any estimate of loss to the government in the event the proposed sale was delayed pending completion of various status of various data base line gathering analysis?

A Not to my knowleedge.

Q Page 20, please. The last sentence of page 20. "However, the risk of environmental damage due to spills in the entire Sale area is so low that withdrawal of tracts to reduce the potential for oil spill risk offers very little additional environmental protection."

Do you see that sentence?

A Yes.

Q Has your office received from Washington, or have you developed in your office any written standard for judging at what magnitude of environmental damage due to spills you would regard there as being justification for withdrawal of tracts from the sale area?

A No written guideline, no.

Q In connection with your office's design of the marine environmental study plan for the Mid-Atlantic are which you have testified earlier is 75 percent complete, have you received any input from the OCS

A 869

research advisory board?

A I have no knowledge of that at this time.

Q Have you or any member of your staff attended the meetings of the OCS research advisory board?

MR. HYMAN: When?

Q Since its establishment.

A I attended two earlier meetings. I have not attended it, to the best of my recollection, for at least a year. Members of my staff involved in the studies program have periodically attended.

Q Which members of your staff hav attended the meetings of the OCS research advisory board?

A The only ones that I know that definitely have attended meetings of that board are Jean Schneider, who is no longer here, Eiji Imamura and Ken Berger.

Q Do you know whether or not the meetings they attended discussed the design of marine environmental study programs for either the George's Bank or the Mid-Atlantic Sale area?

A Not the ones that they have attended. I don't recall any time that we attended them together.

Q Do you know whether or not there were meetings of the OCS research advisory board which took up the question of designing marine environmental studies

A 870

than on one occasion. Concerning this decisions, I did not speak to him, he did not speak to me.

Q You don't know whether they balanced the non-renewable resource against the renewable resources?

A No.

Q I'm going to repeat the question I asked you earlier in the context of these foundation questions.

Do you have in your office a written standard setting forth whether, and if so, how, the non-renewable oil resources of the Baltimore Canyon are going to be balanced against the renewable living marine resources of the Baltimore Canyon in connection with a decision to lease?

A I'm not aware of any written standard of that kind. On the other hand, it is not my function to balance those factors and it is not my function to decide whether or not we lease.

Q Do you know whether or not then it is the secretary's function to balance those factions?

A I have no idea what his functions are.

Q As part of the marine environmental study program, which is under preparation by your office and which you say is 75 percent complete, is there any plan, Mr. Basile, to gather information on the physical

A 87

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

THE STATE OF NEW YORK and THE NATURAL RESOURCES DEFENSE COUNCIL, INC., et al.,	:	
Plaintiffs,	:	
vs.	:	76 CIV 1229 (JBW)
THOMAS S. KLEPPE, Secretary of the Interior, et al.,	:	
Defendants.	:	

Deposition of KENT FELZZELL

WASHINGTON, D. C.

THURSDAY, JULY 22, 1976

INDEPENDENCE REPORTING, INC.
OFFICIAL REPORTERS
304 Independence Avenue, S.E.
Washington, D.C. 20003

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Q And your calendar does not contain any such notation such a meeting was scheduled on September 26?

A That is correct.

Q When did you leave the department on September 26?

A I do not know.

I would assume that I left it in advance of my 7:30 p.m. dinner engagement that night.

Q Do you recall whether you took with you on September 26 when you left the building at 18th and C Streets the program decision-option document or the memorandum of September 26, 1975, Plaintiff's Exhibit No. 12 for identification?

A I took those items plus several others to review over the weekend in advance of the new week commencing on the 29th.

Q Do you recall what items you took, specifically, over the weekend?

A My recollection is that I took the package of materials that was delivered to me on the 26th of September which would have included the memorandum of September 26, from Assistant Secretary for Program Development and Budget, Roy Hughes, on the subject of program decision-option document on proposed program to accelerate leasing on the Outer Continental Shelf.

Q That is Plaintiff's Exhibit No. 12 for identification?

A That is correct and the attachments thereto in addition to his memo.

His memo is a five-page written memo which summarizes the

background including insecure and expensive oil imports, all environmental impacts, including marine organisms, wetlands and beaches, air quality deterioration, interference with commercial fishing ---

Q Would you look at Plaintiff's Exhibit No. 12 for identification and take a moment to compare it with the document you say was in the package, tell me if what you had was the same September 26, 1975 memorandum which is marked No. 12 for identification?

A That was part of the package but not all, but this was included.

Q So, Plaintiff's Exhibit No. 12 for identification was one of the documents included in the package?

A Yes.

QCan you tell us what additional items were included in the package?

A Yes, attached thereto or in addition to that exhibit, No. 10 was the actual full-length programatic program decision-option document on the OCS accelerated leasing program prepared by the Office of the Outer Continental Shelf, program coordination, dated September 1975.

Q May I see that document?

A You may.

There was also an exhibit attached thereto entitled Table No. 3, estimates of average annual oil spill volumes based on

throughputs spill rates over the life of the field.

MR. HYMAN: While the reporter is waiting, please note the two gentlemen who came in after the deposition started.

MR. FIAMMA: Stephen Fiamma.

MR. CONNORS: John Connors.

MR. HYMAN: Identify yourself for the record.

MR. FIAMMA: We are law interns in the Nassau Attorney's Office.

THE WITNESS: May I continue?

BY MR. LIKE:

Q You identified Table No. 3, consisting of how many pages?

A The table itself is one page and, then, there is a three-page explanation of Table No. 3 attached thereto.

Q May I see it, please?

Before you continue, Mr. Frizzell, I note that the Table No. 3, which you have given me, bears a notation in the right-hand corner which reads, "No. 9, Identification No. 7/14/76."

Are you aware that that is an identification number of an exhibit marked in this proceeding?

A No, I was not aware of that.

Q Is the document which is in your possession now marked Table No. 3, the document which you had in your package or a copy of the document which you had in your package?

A Which I have, or had ---

A No, sir.

Q Is your answer the same with respect to option 3?

A That would be generally true.

Actually there were four options on the decision ocument -- other -- the first three that are listed plus ny other.

Q And your answer would be the same with respect to any other?

A Yes.

Q You took this package home with you on the 26th which was a Friday, is that right?

A Definitely yes to your question, but I want to say there may have been materials in addition thereto.

Q Do you recall any such additional materials at the present time?

A No, but I am confident that considering my duties at that time that there were other pressing issues other than a decision meeting on accelerated OCS proposal coming up on Monday that would have necessitated me taking home other materials unrelated to this issue.

Q Do you recall, in fact, you did take home other materials unrelated to this issue?

A I do not recall in fact, but I am confident that such, in fact, occurred.

Q Do you recall what other pressing issues engaged

A 876

Q You don't recall the arguments that were either made on September 29 or that you had heard about before September 29 as to the issue of separating exploration and production?

A No. You see, as Solicitor many of the policy issues, of which this would be one, were not within my province. That was the program people including the Secretary, the Under Secretary, the Assistant Secretaries in the particular program areas. I naturally get subjected to some of that by attending meetings, but sitting around the secretarial luncheon room, the secretarial breakfast, but as Solicitor I don't sit down and mull over, get a memorandum from the Solicitor's staff. We are involved only when legal issues affecting a policy issue emerge.

Q On September 29, 1975 would you say that you had only a slight familiarity with the pros and cons of separating exploration and production?

A I had the familiarity of that written material that was presented to me on the 26th of September plus a general knowledge of the issues acquired theretofore as a result of being around the Department for three years.

Q I would like you to characterize what you mean by a "general knowledge" of that issue acquired by being Solicitor and being around the Department. What did you know about the issue on September 29, 1975?

A I knew that there were proponents of separating

exploration from development.

Q Did you know what the arguments were that were advanced by the proponents who favored separating exploration and production?

A Not in any specific detail.

Q Did you know what the arguments were generall speaking?

A No, other than the issue existed. Of course, as I say, the memorandum given to me has that issue discussed on September 26 and it was discussed verbally at the 29th meeting.

Q Were you familiar with the views of the Council on Environmental Quality on or prior to September 29, 1975 concerning the issue of separation of exploration from production?

A Did they not comment in the EIS on the EIS? I think they did and I think their comments went to that issue. I don't recall specifically.

Q Do you recall reading the comments of the CEQ on that issue before September 29, 1975?

A I would have to refresh my recollection and see their comments.

Q You are now looking at Exhibit 2 for identification in order to refresh your recollection as to whether or not comments were made on the subject of separating exploration and production.

MR. HYMAN: Only for the CEQ. Please feel free to

A 878

Not because I was involved in the policy program end of it, but because I was at that time the second-ranking official in the Department as Solicitor and I was invited to the dinner. I sat next to the Lieutenant Governor of Massachusetts, whose father's name is O'Neill, who is well known, but no one at that social gathering mentioned separation and development.

It was a very casual knolwdge of the issue.

Q Was Mr. McKelvey or a representative of the Geological Survey also present on September 29, 1975?

A To the best of my recollection, yes.

Q Would you please look at the attachment to Mr. McKelvey's memo, dated September 24, 1975, containing his comments on the decision memorandum for proposed acceleration?

A Give me some help. I see his cover letter and four pages attached. Do you want me to look at the whole thing or specifically one area?

Q Let's start with the first page over the comments.

Was there a discussion at the meeting of September 29 of the comments presented by Mr. McKelvey?

A What I am looking at one page 1 of the attachment, do you mean?

Q Yes, sir, the first page of comments.

A To the best of my recollection I don't recall comments on items 1 and 2 on that page being verbally discussed at the September 29th meeting. They may well have been or his

did not ---

BY MR. LIKE:

A 879

Q Did you read the attachments or just the summary by Turcott?

A I can't say I read each of the attachments but I read through them, if you know what I mean. I did not just read Turcott's summary.

Q Is peruse a better word?

A I individually leafed and read portions of the attachments. But I can't say that I read the introductory clauses that were nonsubstantive.

I will tell you this ---

MR. HYMAN: Do you mean that is part of ---

THE WITNESS: This is part of this.

MR. HYMAN: Give it by exhibit numbers.

THE WITNESS: We have now been talking about Frizzell Exhibit 2 but part of the package delivered to me on September 26 was an additional summary by George Turcott marked Frizzell Exhibit 3 which are those comments of the State of Massachusetts. That, I also had.

I must in all candor tell you -- they were there in my office, I had examined them before particularly with regard to legal issues involved, but that weekend, rather than lugging home three volumes of the programmatic EIS, I simply did not do so.

heating up. I had numerous conversations with Roy Hughes about it, about OCS proposed lease-sale in Southern California. I recall telephone conversations and whether it was this period of time or in close proximity thereto, meeting with officials of California that Governor sent back here from the State of California. I remember talking to Mr. Hughes about it, setting a schedule for him to go out and see Governor Brown and his officials. I remember talking to the White House about setting up meetings with California officials and making sure that everything we knew and proposed was shared with the State officials.

Q With whom in the White House did you speak during that period concerning OCS leasing?

A Two persons, and if you would allow me, I will go to the last two entries in my calendar for that month of September 22 and 23 because they are the written memorandum reinforces my recollection.

On Monday, September 22, I have in my own handwriting in parenthesis, a note to myself that just merely says, "Rumsfeld, re: California OCS."

Q All right.

A Again on that same date, I have a similar note in parenthesis, saying "Call Rumsfeld, re: OCS.

The following day, on September 23, I have a memo in my own handwriting in parenthesis that says, "Rumsfeld, re:

Have you now covered all of the diary entries between -- for the month of September concerning the OCS?

A I have, sir. The 3rd, 19th, 22nd and 23rd. And you are welcome to have copies of them if you would like.

Q Other than the conversations which you have related with President Ford and the conversations with Mr. Rumsfeld, did you have any communication with any official in any of the offices of the Executive Department concerning OCS leasing and as examples of offices of the Executive Department, specifically I would include the Office of Management and Budget; the Domestic Council ---

A Any others?

Q The Energy Policy Office.

A Energy Resource Council?

Q Energy Resource Council, yes, or any other office within the White House or the Executive Department concerning ---

MR. HYMAN: Do you include CEQ?

MR. LIKE: CEQ is certainly an office within that department.

BY MR. LIKE:

Q Concerning accelerated OCS leasing prior to September 29, 1975 by communications ---

MR. HYMAN: Now, you personally, not anyone on your staff but you personally, and if you do have any recollection with whom or what was said?

A 882

rc21

didn't say anything about leasing.

BY MR. LIKE:

Q Did you ever speak to him about OCS leasing?

A I feel confident here again that in the natural course of our conversations about natural resource matters, Glen Schleene no doubt would have asked a similar question as Jim Mitchell, "How are you coming on OCS?" And I would have told him where we were, a status quo of when the draft final EIS's were in what stage of preparation, and so on, what a tentative lease schedule was, those types of things but nothing specific that I can recall.

Q You can recall discussing with him OCS leasing schedules?

A No, sir. I should amend that because here again I am speculating, trying to be truthful with you. You may have -- those types of things may have been mentioned but I am speculating. I don't want to say "No, I never had a conversation with Glen Schleede," because it is likely that I did.

MR. HYMAN: But you have no present recollection of what you discussed?

THE WITNESS: No, sir.

MR. HYMAN: And what you just said is that it could have been discussed.

THE WITNESS: It borders on speculation. It could have been discussed.

to get his questions asked and I think I have a right of cross examination, too, so I think that maybe you should get to the important stuff.

MR. LIKE: I intend to give Mr. Bialik an opportunity to ask questions.

MR. HYMAN: What about Mr. Hyman?

MR. LIKE: We discussed that. And you as well.

MR. HYMAN: With the 12:00 o'clock deadline in mind.

MR. LIKE: And with your cooperation.

MR. HYMAN: I am trying to cooperate.

BY MR. LIKE:

Q Mr. Frizzell, do you recall when you signed the decision memorandum electing option number one?

A I recall at the end of the meeting on September 29th, 1975, after hearing full discussion of the issues presented by several and all parties present that at the end of the meeting I verbally announced what my decision was and then signed option one.

Q And do you recall what time the meeting ended?

A Not specifically, no.

Q What is your best recollection?

A Some time around, prior to noon.

MR. ZIMMERMAN: Prior to noon?

THE WITNESS: Prior to noon.

THE WITNESS: Yes.

MR. HYMAN: And you considered 3 and rejected 3?

THE WITNESS: Yes.

MR. BIALIK: Cyril, can I continue?

MR. HYMAN: You considered 3 and rejected 3?

THE WITNESS: Yes.

MR. LIKE: That is not fair, Cyril, let him finish.

BY MR. BIALIK:

Q Mr. Frizzell, am I correct that you have a law degree?

A Yes, sir.

Q And would you tell us in what year and from where?

A In 1955 from Washburn University Law School, Topeka, Kansas, later converted to a JD in 1969 or '70.

Q Do you have any other post-bachelor's degrees?

A No.

Q Did you pursue any other post-graduate study besides the study of law?

A No.

Q And do you have a bachelor's degree?

A Yes.

Q And can you tell us the date and the school?

A It was 1952 or 3, at Friends University, Witchita, Kansas.

Q And did you have a field of concentration?

A In undergraduate school?

Q Yes.

A No. Public speaking. I majored in speech in undergraduate at Northwestern University prior to getting a degree from Friends University.

Q Now, prior to or during September 29, 1975, do you recall having any discussion with other members of the Interior Department about whether or not to circulate the final programmatic environmental statement for comment and public hearing?

MR. HYMAN: Final programmatic ---

MR. BIALIK: By FEA.

MR. HYMAN: The final?

THE WITNESS: Yes. I did have such conversations.

BY MR. BIALIK:

Q Was there more than one such conversation?

MR. HYMAN: Well, you better ask him in what capacity he had those conversations, as the Secratary or Solicitor.

MR. BIALIK: No, let's first find out how many we are talking about.

THE WITNESS: I am sure there was more than one.

BY MR. BIALIK:

Q And do you recall what the time period was?

A No, sir.

Q Well ---

A Prior to September '75?

Q Did some such conversations occur while you were Acting Secretary?

A Undoubtedly.

Q Do you recall with whom you had these conversations?

A No, not an exclusive list, others I can't specifically recall, but I do specifically recall discussing the issue with Roy Hughes, Assistant Secretary; with Dave Lindgren, my Deputy Solicitor; and I feel confident that other program Assistant Secretaries involved or affected by such a decision would have been consulted and also in on the conversations.

Q Was a decision reached on whether or not to circulate the program FEA for comment and public hearing?

A Yes.

Q Can you tell us approximately when that decision was reached?

A Sometime in the early part of July to the best of my knowledge and recollection.

Q Who made that decision?

THE WITNESS: Would that be it?

MR. HUGHES: Just for the record the final statement was published on July 11, 1975, and it would take some time at the printers so it must have been before that.

THE WITNESS: It could be as early as May.

BY MR. BIALIK:

Q That the decision was made?

A Yes.

Q Who made the decision?

A My recollection is that I did.

Q Do you recall if any of the people with whom you discussed this issue urged that you decide to circulate that document for comment and hearing?

A Had that I circulate it?

Q Yes.

A Yes, there were those. There were people on both sides of the issue, those who urged me to and those who urged me not to.

Q And do you recall the names of any people who urged that you circulate that document?

A My recollection is that one of the proponents was Roy Hughes and Dave Lindgren, and an Assistant Solicitor by the name of Bohlke.

Q How do you spell that?

MR. HUGHES: B-o-h-l-k-e to the best of my recollection.

THE WITNESS: B-o-h-l-k-e.

BY MR. BIALIK:

Q And do you recall who, if anybody, urged you to decide against circulating it?

MR. HYMAN: Would it be an urging or a recommendation?

MR. BIALIK: Call it a recommendation then.

THE WITNESS: I don't recall who, if anybody -- who the spokesman on that side of the issue was.

BY MR. BIALIK:

Q Do you recall if there were a spokesman on that side?

A I remember debating the merits of it so there must have been somebody on that side of the issue.

Q Do you recall what arguments were presented to you in favor of circulation?

A Not specifically at this time, with the time lapse, no.

Q Was any recommendation to circulate made to you in writing?

A Not that I recall. There could well have been. There could have been a briefing memo. The best I remember was, in fact, the rationale for the ultimate decision on my part and that was: "what harm can there be in doing so."

Q In circulating it?

A Yes, and thereby obtaining legitimate comments of the public and interested parties.

Q And do you remember if there was any argument on the other side?

A I remember it was an issue, it was just not "let's do it." Therefore, there had to be somebody on the other

side, but I don't recall what it was.

Q Forgetting about who it was ---

A -- or the arguments therefor.

I also remember it was essentially a legal question as opposed to a policy question.

Q Now, you have in the stack of papers before you the final program PDOD, do you not?

A Yes, sir, a copy thereof.

Q Right.

Did you read that document word-for-word?

MR. HYMAN: I direct the witness not to answer. It was asked by Mr. Like and answered on three occasions.

MR. BIALIK: It was not asked.

MR. HYMAN: It was asked by Mr. Like and answered on three occasions. He testified that he read the documents. And he specifically read the PDOD.

MR. BIALIK: What I am asking is whether it was read word-for-word page-for-page as opposed to being reviewed.

MR. HYMAN: He testified that he read it word-for-word, page-by-page, the only thing that he didn't read page-for-page was the appendix table 3 and that he reviewed. I remember it. You want to go over the testimony and see it again? We got it right before us and you have it right on your desk and you can confirm it with Mr. Like.

BY MR. BIALIK:

Q I think --

A I would be pleased to answer the question.

MR. HYMAN: I don't want you to answer again.

MR. LIKE: Ask him if he adopts the statement by Mr. Hyman?

BY MR. BIALIK:

Q Do you adopt the testimony of Mr. Hyman?

MR. HYMAN: I did not testify. I am a lawyer here, I represent a client. I made no statement. If you want to waste time we'll go through the record where Mr. Like asked the exact question and he answered.

MR. BIALIK: You direct him not to answer?

MR. HYMAN: No, I did not.

MR.BIALIK: Then I want an answer.

THE WITNESS: I adopt the statement of my counsel that neither did I read word-for-word ---

MR. HYMAN: He is talking about the PDOD.

THE WITNESS: The PDOD, I read word-for-word.

BY MR. BIALIK:

Q What about the decision memorandum?

A Yes, word-for-word.

Q And you did not read word-for-word Exhibit 2? Is that correct?

A That was my earlier testimony.

Q Well, is it correct?

A And it is correct.

Q And Exhibit 3 also word-for-word?

A That's true.

Q Do you wish to -- well, withdrawn.

MR. HYMAN: Does he wish to what, change his testimony?

MR. BIALIK: Withdrawn.

MR. LIKE: There is no question, he withdrew.

MR. HYMAN: I didn't hear the second part. Sorry.

BY MR. BIALIK:

Q As of September 29, 1975, was it part of the data available to you that the price of oil for Americans would be cheaper if the accelerated OCS program was adopted?

Can you answer the question without referring to any document?

A To the best of my recollection, there was data in the documents available to me that at least would infer your premise, not perhaps in the words you stated.

Q Okay.

In those words or in substance, and I am not trying to ---

A Yes.

Q Okay. Was it part of the data that you had on September 29, 1975, that imposed conservation measures would

BY MR. LIKE:

Q At any time before September 29, 1975, did you receive any information as to how much acreage would be offered for lease sale pursuant to the six sale proposal?

A No, because that would have depended on nominations and impact statements being filed.

Q Coming back again to the meeting on September 29, was there any discussion as to any estimates by the Department of the amount of acreage that was anticipated to be leased as the result of the six sale proposal and that is as distinguished from offered for lease?

A Not to my recollection.

Q Did any information come to your attention before September 29, 1975, as to the Department's estimates of the amount of acreage to be leased pursuant to the six sale proposal?

A Not to my recollection.

Q Was there any discussion at the September 29, 1975, meeting or prior thereto of assumptions as to the amount of acreage to be offered or the amount of acreage to be leased in future nominations and bids?

A Other than in general reference of area, possible sales in an accelerated leasing schedule, no reference to amounts of acreage were discussed to my recollection.

MR. LIKE: Let's have that answer reread, please.

A Well, if I may refresh my recollection from my notes as you have just done from them, could I see that exhibit, please?

Q Certainly.

MR. BIALIK: It is exhibit 11.

[Documents provided to the witness.]

THE WITNESS: According to my handwritten notes which are a result of a briefing that I received yesterday --- no, the day before yesterday, by the Solicitor's Office, as a result of information obtained from them, I have written the 10 million acre goal was abandoned by the Department of Interior in November of 1974. It was later deleted.

BY MR. LIKE:

Q When it was abandoned in November of 1974, it was replaced, was it not, by the so-called six sale proposal; is that right?

MR. HYMAN: Do you know?

THE WITNESS: That's what my notes reflect as a result of the briefings from the Solicitor's Office.

BY MR. LIKE:

Q All right.

Do you know how many acres ---

A I don't know that they briefed me accurately, you understand, but these are my notes.

Q Do you know how many acres were contemplated to be

offered for lease under the six sale proposal which replaced the 10 million acre target?

A No, because to my knowledge there never were any acreage amounts assigned to any of those such six sale proposals.

Q Was there up to September 29, 1975, so far as you know, any acreage target assigned to the six sale proposal?

A Not to my knowledge.

Q Are you familiar with a document which is entitled "Report to the Congress, Outlook for Federal Goals to Accelerate Leasing of Oil and Gas Resources on the Outer Continental Shelf, Department of the Interior, Federal Energy Administration, by the Comptroller General of the United States," dated March 19, 1975?

A No, I am not familiar with it.

Q In your capacity as Acting Secretary, did you ever have any contact with any representatives of the Comptroller General's Office or the General Accounting Office with respect to the accelerated leasing program?

A Which agencies?

Q The General Accounting Office, Comptroller General? GAO and the Comptroller General? With respect to the accelerated leasing program?

A Not to my recollection.

Q Are you familiar with the September 18, 1974, Carter

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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

THE STATE OF NEW YORK and THE NATURAL RESOURCES DEFENSE COUNCIL, INC., et al., Plaintiffs, vs. THOMAS S. KLEPPE, Secretary of the Interior, et al., Defendants.	76 CIV 1229 (JBW)

Deposition of KAREN ELLIOTT HOUSE

WASHINGTON, D. C.

WEDNESDAY, JULY 21, 1976

INDEPENDENCE REPORTING, INC.
OFFICIAL REPORTERS
304 Independence Avenue, S.E.
Washington, D.C. 20003
(202) 547-1005

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PROCEEDINGS

MR. BIALIK: On the record.

Whereupon,

KAREN ELLIOTT HOUSE

was called for examination by counsel for the plaintiff State of New York and, having been first duly sworn by the notary public, was examined and testified as follows:

MR. BIALIK: Let the record show that Mr. Hyman announced that there will be no stipulations for this deposition.

MR. HYMAN: That is a fair statement.

DIRECT EXAMINATION

BY MR. BIALIK:

Q Ms. House, are you a reporter for the Wall Street Journal?

A Yes, sir.

Q And is that here in the Washington, D. C. office?

A Yes.

Q I show you what appears to be page 2 of the Wall Street Journal, dated Thursday, June 17, 1976, and refer you to an article in column 3 ---

A June 13?

Q Excuse me, June 17, 1976.

And I refer you to an article with the headline "U.S. Sets First Sale of Oil, Gas Leases in Atlantic August

17" and I ask you if you can identify that article.

A As what?

Q Well, have you ever seen it before?

A Oh, yes.

Q And are you the author of that article?

A Yes.

MR. BIALIK: May I ask that the page of the Wall Street Journal be marked for identification as Exhibit 1.

(House Deposition Exhibit No. 1 was marked for identification.)

BY MR. BIALIK:

Q Now, the first paragraph which I would like to call to your attention reads as follows.

MR. HYMAN: Wait a second. I assume she can read...

MR. BIALIK: Mr. Hyman, I am asking the questions.

MR. HYMAN: Can you read, Ms. House?

THE WITNESS: Yes.

MR. BIALIK: Mr. Hyman, when you cross-examine, you cross-examine.

MR. HYMAN: It is your money.

BY MR. BIALIK:

Q It says, "The Interior Department set Aug. 17 for the first federal oil and gas lease sale off the Atlantic Coast but postponed sales of two other Atlantic tracts until 1977."

Can you tell us what that paragraph refers to? Or to

phrase it differently, can you tell us what the basis of the statement in that paragraph is?

A A meeting between Secretary Kleppe and three reporters.

Q When did the meeting take place?

A June 16th.

Q Of 1976?

A 1976.

Q Where was it held?

A In the Secretary's office at the Interior Department.

Q And were you present?

A Yes, sir.

Q And can you tell us what other reporting services, if you know, were present?

A UPI and the Washington Star.

Q Now, referring to this sentence I just read beginning with the words "The Interior Department set Aug. 17 . . ." can you tell us who at the Interior Department is referred to in that sentence?

A Secretary Kleppe.

Q And can you tell us what he said at that meeting of June 16, 1976, about a sale in the Atlantic?

MR. HYMAN: His exact words.

MR. DIALIK: Mr. Hyman, I am conducting the examination.

THE WITNESS: He said that the Department had decided

to hold the first hearing -- the first lease sale on August 17, and that the other two in the Atlantic were being postponed for further environmental studies.

BY MR. BIALIK:

Q And did he identify at that meeting which area of the Atlantic he was talking about in terms of the August 17th lease sale?

A He asked one of his assistants, Mr. Knight, to go out and check which particular area the sale was scheduled for.

Q And did he subsequently in the meeting state which area that was?

A Yes, that it was the area off New Jersey and Delaware rather than New England or Georgia.

Q Now, I show you what is page 49 of the New York Times, dated Thursday, June 17, 1976, and refer you ---

A It is not June 13.

Q June 17th.

A Yes.

Q And refer you to columns 3 and 4 to a story headed "Sale of Offshore Leases for Oil Drilling Slated." In small print under the headline are the words "The Washington Star."

I ask if you have ever seen that Washington Star report?

A I saw that story when it was in the Star, the afternoon of June 16th, I think.

MR. BIALIK: Can we have that marked for identification as Exhibit 2.

(House Deposition Exhibit No. 2 was marked for identification.)

MR. ZIMMERMAN: Have you ever established that she saw that article?

MR. HYMAN: Let him establish what he wants.

MR. BIALIK: Will you let me ask my questions?

BY MR. BIALIK:

Q Would you glance, please, at the story in the New York Times and see if it is substantially similar to the story you recall from the Washington Star? I am not asking if it is word for word the same, but just if it is substantially similar.

A Yes, sir.

Q OK.

Now, I refer you to the first paragraph of this article which reads as follows: ---

MR. HYMAN: What article are you talking about, Mr. Bialik?

MR. BIALIK: The article on Exhibit No. 2.

MR. HYMAN: You mean the New York Times story?

MR. BIALIK: Mr. Hyman, Exhibit 2 has been identified.

MR. HYMAN: As the New York Times story?

MR. BIALIK: Mr. Hyman, you will see in the record

what it is. Here is Exhibit 2 (indicating).

BY MR. BIALIK:

Q "The first lease-sales to United States oil companies of rights to drill for oil and gas off the Atlantic coastline have been scheduled for Aug. 17 in New York City, Interior Secretary Thomas S. Kleppe said today."

I ask you, is that a fair statement of your ----

MR. HYMAN: First of all, it is not a quote. You identified it as a quote. It is a statement in a newspaper without quotes.

MR. BIALIK: It is a quotation from Exhibit 2.

MR. HYMAN: Oh, that you quoted from?

MR. BIALIK: Mr. Hyman, the record is very clear on this. I am quoting from Exhibit 2.

MR. HYMAN: I am not clear. I looked for the quote and I didn't see the quote.

MR. BIALIK: I was quoting from the exhibit.

MR. HYMAN: Oh, you were quoting from the exhibit. I think that is clear to me now.

BY MR. BIALIK:

Q Does the sentence I just read accurately reflect the statement by Mr. Kleppe at the June 16, 1976 meeting that you previously testified to?

A Yes, sir.

MR. BIALIK: I have no further direct.

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A 902

In the Matter of:	:	
State of New York and the Natural resources Defense Council, Inc.,	:	Complaint for Declaratory and
Plaintiffs	:	Injunctive Relief
against	:	76 Civ. 1229
Thomas S. Kleppe, Secretary of Interior	:	
Defendant	:	
And	:	And
County of Suffolk, County of Nassau, Town of Islep, Town of Hempstead, Town of North Hempstead, Town of Oyster Bay, Town of Huntington and the Board of Trustees of the Town of Huntington and Concerned Citizens of Montauk, Incorporated	:	Civil Action No. 75-C-208
Plaintiffs	:	
against	:	
Rogers C. B. Morton, Individually and as Secretary of Interior, Curtis Berklund, Individually, and as Director of the Bureau of Land Management	:	
Defendants	:	

Washington, D. C.,
Wednesday, July 14,

Deposition of ROYSTON HUGHES, the defendant herein, called for examination by counsel for the plaintiffs in the above-entitled action, pursuant to notice,

Table 3 was omitted from the first that was sent me, and it was sent as a subsequent mailing, I think by either Mr. Hoese or Mr. Hughes. It was a missing piece.

MR. JENSEN: Of PDOD.

THE WITNESS: I have reviewed the two documents given to me and I am familiar with both.

BY MR. LIKE:

Q Please mark that for identification. Mark the first document as 9-A and the second one as 9-B, please.

(The documents referred to were marked Exhibits Nos. 9-A and 9-B for identification.)

MR. JACK HUGHES: Off the record.

BY MR. LIKE:

Q In September 1975, were you in charge of the OCS Coordination Office?

A Yes.

Q Were you in charge of the preparation of the PDOD?

A Yes.

Q Are you familiar with Part 301 of the Department of the Interior's Departmental Manual which contains a Chapter 1 entitled "Program Deficient Option Documents."?

A Yes. I am generally familiar with that chapter.

A 904

A In that we are referring to a great number of meetings and I observed people writing on various types of paper in those meetings, yes, people took notes at those meetings.

Q Do you recall when the first draft of the PDOD was prepared?

A No.

Q Can you give me an approximation as to how long after the beginning of the prepation of the PDOD in the early summer of 1975 you saw a draft of either a portion of the entire PDOD document?

A I would guess in a matter of weeks, but I have no way of knowing whether it was six weeks or eight weeks, but it took a matter of weeks to compile the information contained in the final document. It could have taken as many as twelve weeks.

Q Do recall when the PDOD was completed by your staff and ready for comment?

A I believe in late August or early September of 1975. Part of the routine of writing a PDOD would be to circulate the draft PDOD to the principal offices within the Department and receive comments as to the accuracy or bias on the PDOD.

Q Does the name Darius W. Gaskins, Jr. strike a cord

draft programmatic PDOD for accelerated leasing?

A I don't recall the specific date, but I did receive a draft copy of the PDOD sometime in the late summer, either late August or early September, as I stated earlier.

Q I show you a document which is dated August 1, 1975 porporting to be a memorandum from the Director of the Office of OCS Program Coordination, signed by Darius W. Gaskins, Jr., directed to the Assistant Secretary for Program Development and Budget and other Assistant Secretaries, as well as the Solicitor and the Director of the Geological Survey and the Bureau of Land Management Director.

I ask you to please tell me whether you recall receiving that document and the PDOD on or about August 1st, 1975?

A Yes, I am familiar with this document and received it shortly after the date on the document.

MR. LITE: Mark that for identification, please.

(The document referred to was marked Plaintiff's Exhibit No. 10 for identification.)

BY MR. LITE:

Q Are you prepared now, having refreshed your recollection by examining Exhibit 10 for identification, to testify

A 906

the spring of 1975, Secretary Morton and I had a discussion with the President and some of his senior staff people again reviewing some of the issues and, I think, particularly as they related it to the legislation that was under consideratio on the Hill.

Q Was there any discussion at that time, either by the President or by Mr. Morton, in which either party indicated that there would be an acceleration of the leasing, Federal leases?

A No. The subject and the accelerated programmatic was in process, so I am sure that the subject of the statement being prepared was discussed, but there was no decision to proceed with the accelerated program.

Q No discussion is what you are telling us. That's what I just asked you.

MR. HYMAN: No, he gave an answer. He said there was no decision and no discussion as a result of this.

BY MR. CATTERSON:

Q That's not responsive. I asked if there was a discussion about this issue.

A There may have been discussion about this. I don't specifically recall the entire conversation -- the entire conversation. The purpose of this meeting was to discuss the

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BY MR. BIALIK:

Q Could you tell us to the best of your recollection what was said by each of the persons at that meeting?

MR. HYMAN: Do you have a recollection?

THE WITNESS: I don't have a recollection of specific comments made. A general recollection of the meeting is that each of the principals opted for Option 1, which was the decision -- the option which called for the decision -- the option to accelerate the program as proposed. The Assistant Secretary for Fish, Wildlife and Parks opted for Option 2, which was to modify the accelerated proposal.

BY MR. BIALIK:

Q Do you remember anything that Mr. Frizzell said?

A Mr. Frizzell, I have a general recollection that he asked specific questions of people and there was some discussion as to their relationship between the programmatic EIF and the site specific EIF for Southern California, because both processes had been ongoing simultaneously so that there was a need to clarify from time to time, which process we were talking about.

Q I take it the whole meeting was concerned with the programmating EIF. Isn't that the case.

MR. HYMAN: Well, wait a second. It was -- You know,

you are asking questions that are loaded. The meeting concerned the impact statement and whatever documents they had in front of them at the time and whatever processes --

MR. BIALIK: No, you are testifying. Let me phrase the question.

MR. HYMAN: Well, phrase the question.

BY MR. BIALIK:

Q Is it a fact that you scheduled this meeting on the Acting Secretary's calendar for the purpose of having a decision made on the programmatic OSC?

A Yes.

Q Now, would you explain again what the confusion was with respect to the California EIF?

MR. HYMAN: What confusion? At the meeting?

BY.MR. BIALIK:

Q Did you just testify that there was confusion as to the California environmental review at the meeting?

A It seems to me I said in response to your question about what was discussed at the meeting that in addition to specific references to the programmatic statement, that subjects related to the EIF process ongoing for the proposed Southern California sale also came up, because from time to time among that group of eight to twelve people there was

occasionally some misunderstanding as to which item we were talking about.

Q And do you recall any of the specific questions raised by Mr. Frizzell?

MR. HYMAN: Relating to what, sir?

MR. BIALIK: Any question raised by Mr. Frizzell at that meeting.

MR. HYMAN: Relating to what?

MR. BIALIK: Whatever questions he raised at that meeting.

MR. HYMAN: Personal questions? Questions relating to the document?

MR. BIALIK: I am --

MR. HYMAN: I have an objection as to form.

MR. BIALIK: Very good.

THE WITNESS: I don't have any specific recollection of questions asked by Secretary Frizzell.

BY MR. BIALIK:

Q Do you remember any persons who became confused, with whom there was an occasional misunderstanding?

A No. My reference to the confusion between the two processes is a general reference, in that both processes were being simultaneously worked through the department, but I

A 910

THE WITNESS: That's correct, sir.

BY MR. BIALIK:

Q I show you what has been marked as -- this is by Frizzell -- or -- Exhibit 9A and 9B which together comprise the programmatic PDOD. Am I correct, sir, that you saw drafts of this document as it was being prepared?

A Yes.

Q And that you read the drafts?

A Yes.

Q And did you read the final PDOD?

A Yes.

Q Did you in any sense approve of this document? That is, were drafts given to you essentially for your approval?

A You mean, in that the drafts were in fact compiled by my staff people? Yes, I approved the final version of the PDOD which was submitted for departmental approval and ultimately for the Secretary's decision.

Q I refer you to Page 4 of the PDOD, and to the statement on that page in the bottom paragraph, the costs of OCS oil have been variously estimated to range from $1.00 to $7.00 per barrel. Can you tell us how this computation was made?

A I think if you observe the footnote on that page, you will find that the basis is there for how that dollar figure is arrived at. The costs of OCS oil referred to in this document and generally in the discussions on the government's case for OCS development refer to the actual costs to produce oil in the Outer Continental Shelf, which will vary between $2.50 and $3.50 per barrel, exclusive of transfer payments. Transfer payments are the bonus and royalties which companies pay, and it is a fee to get the resource under the bonus bid leasing system, so that in a comparison between OCS produced oil,which will sell for $12 a barrel,and Mid-East oil, which will sell for $12.00 a barrel, the difference between the $3.00 and the $12.00 for the OCS oil goes largely to the taxpayer in the form of bonuses and revenues, whereas there is no difference between $3.00 and $12.00 for Mid-East oil. It all goes to the Mid-East. Thus --

Q I'm sorry?

A Thus billions of dollars -- In those years it was $24 to $27 billion of additional U. S. revenue went to the Mid-East.

Q Now, do I understand you correctly that the assumption here is that the OCS oil would be sold for the same price as the OPEC or the imported oil, and the question that you are computing over here is what the cost of production is

for the OCS oil?

A Yes, at that time and the present time a barrel of oil sells for -- on the open market, for the going price, whether it's produced for the Mid-East or for the U. S. -- yes, the assumption is that they would sell for the same price. Now, there is some variation in qualities. High sulphur oil sells for less than low sulphur oil, et cetera. Largely they sell for the same dollar value.

Q Now, do you have any information or do you know what the source would be for estimating what the transfer payments would amount to just in a broad range?

A Which is in fact based on estimates from the Geological Survey in terms of reserves. A theoretical or tentative production level could be arrived at for a given area, like the Baltimore Canyon area, and one can assume a production there of perhaps a million barrels a day selling for $12.00 a barrel on the open market, then the $9.00 transfer payment figure, and there's also a profit figure, 6 to 10 percent profit in our calculations.

Would -- I forgot what your question was, now.

Q I think you are answering me. What essentially would the transfer payments amount to?

A It would be, in that particular case, $9 million per

and royalties, the transfer payments, and this department has contributed,you know, dollars on the order of billions of dollars to the Federal Treasury as the result of OCS leasing, and that's when I explained the difference between the value to the U. S. citizen, taxpayer, between domestic OCS oil and Mid-East oil is that $9.00 difference between $3.00 and $12.00 comes back to the Federal Treasury.

BY MR. BIALIK:

Q Well, okay, but are you telling me then that in terms of estimating what the transfer payments, what the addition of the transfer payments would do to this $1.00, $7.00 per barrel figure is not available?

MR. HYMAN: He didn't say that. He said it's an estimate.

MR. BIALIK: What's an estimate, the $1.00 to $7.00?

BY MR. BIALIK:

Q What you have here is $1.00 to $7.00 per barrel exclusive of transfer payments. What I'm trying to find out is if there is any estimate as to what the cost of production would be including the transfer payments.

A It's a highly speculative question because I can't tell you how much a barrel of oil is going to sell for in 1985 which is probably when, assuming they have a sale on the

A 914

Q Do you know whether these studies have been used in any way in connection with the preparation of the PDOD?

A No.

Q Do you know of your own knowledge -- Withdrawn.

Chapter 1, Section C of Part 301.14A2 states --

MR. HYMAN: What document?

BY MR. LIKE:

Q Departmental Manual, Part 301, Chapter 1, Section C, sets forth the duties of officials responsible for preparing program decision option documents. Are you familiar with the obligations of officials who prepare program decision documents?

A Generally.

Q And you were the responsible officer responsible for preparing the PDOD. Correct?

A Yes.

Q It states that such officials shall obtain information necessary for the preparation of decision option documents and shall conduct such study, analysis and evaluation. Are you personally familiar with what studies and analyses were conducted by the staff in connection with the preparation of the PDOD?

A I am generally familiar with the quality and content

know what costs are included in that figure?

A Generally that range is the range attributed to the company's development costs, the actual dollars the company has to expend to survey, drill, put in production facilities, and produce.

Q Does this include any overhead expenses?

A I would assume that it does.

Q So it's not the out-of-pocket to the company?

A Well, I stated previously that the figure, the range, $1.00-$7.00, is the amount of money that it would cost to produce oil on the OCS, including a profit figure for the companies of 6 to 10 percent.

Q And over it.

A I said this was the cost to produce plus a profit figure.

Q Okay. Do you know what the basis of that figure is?

A Studies done both in this department, in the Office of OCS Coordination and, to the best of my knowledge, studies done outside the department.

Q Okay. So studies done in the OCS?

A The Office of OCS Coordination.

Q Okay. And studies done outside of the Department of Interior?

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MR. HUGHES: What page are you on now?

BY MR. BIALIK:

Q Now, referring to Page 10 of Exhibit 15, I refer you to the paragraph beginning in the middle of the page, and to the bottom line,in which the statement is made -- well, let me read the entire sentence: "These measures require intervention because they would not otherwise be undertaken by consumers."

MR. HYMAN: Excuse me, sir.

MR. BIALIK: Presumably.

MR. HYMAN: You are on Page 10?

MR. BIALIK: Yes, sir.

THE WITNESS: I have that one.

MR. BIALIK: Your witness has found the line.

MR. HYMAN: Where is it?

MR. HOESE: Second paragraph.

MR. CATTERSON: Get it together.

BY MR. BIALIK:

Q "Presumably because they impose net costs on the consumer." Would you tell us what net costs are referred to in that sentence?

A It is my general understanding that the net costs referred to would cover a whole range of topics.

what kinds of net costs are you referring to there?

A Creature comfort, the quality of the ride, the very thing that the American consumer has refused to abide by because he is now buying larger cars again.

Q So these costs are social costs?

A To the best of my recollection.

Q And now do you know what the basis for this statement is, the sentence that I just read to you? What the data sources are?

A Not specifically, no.

Q Well, do you have any general knowledge of what the sources are?

A Generally, a recollection of the reaction to the fuel embargo was a period of hysteria in this town as people tried to decide how they could deal with a very minor curtailment in energy supplies, and the subject of changes in lifestyle occasioned by either mandatory conservation measures or voluntary conservation measures became the subject of wide debate. The American public, as represented by their legislators, refused to support mandatory conservation measures and thus did not provide the option which organizations like the Ford Foundation offered as a way of avoiding increased energy production -- be it coal, oil or gas -- in this country.

Q Now does this net cost discussion -- does that consider whether or not there are any net benefits to the consumer from taking these actions?

A I assume it does but I don't specifically remember the recommendations of the Ford Foundation.

Q What does the Ford Foundation have to do with it?

A The previous paragraph -- the source of the conservation measures comes basically from the Ford Foundation report.

Q You mean what specific things fall into what specific category?

A No. My interpretation of that paragraph is that it comes largely from the reference to the Ford Foundation report which offered the Government a whole spectrum of conservation measures to impose as opposed to increased energy development in this country.

Q I refer you to page 11 of Exhibit 15, specifically to the sentence beginning on the third line and which I will read: "However, as long is the total cost per barrel of OCS oil is less than the price of oil it is better to increase OCS production by one barrel than to conserve an additional barrel through mandatory conservation measures. This is true because the barrel of production has a price (value) in excess of its total cost; thus it provides a net savings if it is

produced." Could you tell us what those sentences mean?

A. Those sentences basically refer to the economic theory about the social cost of production as opposed to the actual cost of production and I won't attempt to give you a detailed interpretation on that. But basically the sense of the statement is meant to be that if in fact we locate and produce a barrel of domestic resource, there is a value to the society above and beyond the actual $12 per barrel of that oil because the difference between the cost of production or the transfer costs and the costs, the selling price, are put back into the economy of the society.

The conservation issues, on the other hand, are a negative value in the terms of the dynamics of the society imposing a negative value having people do less, either making fewer cars, fewer roads. It is in a sense talking about social costs, not dollar costs.

Q. You are talking about the total cost per barrel of OCS oil. You are talking there about dollar costs or social costs?

MR. HYMAN: He just answered.

THE WITNESS: I'm just talking about a social cost, the cost to society by imposing a negative. A conservation measure is greater than the cost to the society by developing

who were the parties who held different views with respect to

or producing an additional barrel of oil because the production of that oil implies, in the sense of gross national product, a ripple effect throughout the economy. And I don't profess to be a sophisticated economist. Dr. Gaskins or Dr. Moffet are surely the architects of these words. But it talks about the social costs of an economy which is expanding as opposed to an economy which is negated by conservation measures.

Q Do you have any background in economics?

A Yes. One course.

Q What level course was that?

A College level.

MR. HYMAN: Don't answer the question.

MR. CATTERSON: It's very important because he holds the position of Under Secretary or Assistant Secretary for Budget and Management.

THE WITNESS: Program Development and Management.

MR. HYMAN: Give him the name of the course.

THE WITNESS: Basic economics.

MR. HYMAN: Who was your professor?

MR. CATTERSON: That's not germane.

BY MR. BIALIK:

Q. Was that an introductory course in economics, one-semester course?

A. I was the Legislative Assistant to the Congressman.

Q. Now, going back to the sentence on the top of page 11 - this is true because the barrel has a price in excess of its total cost. Are you talking there about social costs or economic costs?

A. I'm not talking about it, but the statement is talking about social costs, social value, perhaps price is the wrong term.

Q. All right, what is the term price referred to? Is that the dollar price or the social price?

A. It's my interpretation that that's a social price.

Q. So it's a social price in excess of its total social cost. Is that what --

A. That's my understanding, yes.

Q. And that in continuing thus it provides a net savings if it is produced, a net social savings?

MR. HYMAN: You asked the question. He answered it two times already.

THE WITNESS: Yes.

BY MR. BIALIK:

Q. Now, the previous sentence, as long as the total cost per barrel of OCS oil is less tban the price of oil, is that social cost and social price?

A. That's my understanding, yes. Social price and selling price may be interchangeable in terms of price of oil. The social cost and the selling cost may be exactly the same.

Q. You say the social price and the selling price may be interchangeable?

A. That's right. The price of oil may be $12 a barrel in real economic terms or $12 a barrel in social terms, social cost versus economic cost.

Q. Why would those two be equal to one another?

A. Why couldn't they be?

MR. HYMAN: Don't argue. Can you answer his question?

THE WITNESS: I don't know. And I've explained earlier that the economists, Dr. Gaskins or Dr. Moffet can give you a much fuller explanation of social theory of costs and benefits.

Q. Okay, to the best of your understanding in this sentence total cost per barrel of OCS oil is less than the price of oil, we are dealing again with social costs as against social price of oil?

A. Yes.

Q. Now, I believe that you told Mr. Like that there were some unpublished FEA reports that were the basis of portions of this PDOD. Do you know --

Q In this case it would be you who ultimately set the time frame, wasn't it?

A I think generally, with the caveat that the Under Secretary who by that time was incapacitated and was on convalescent leave status, was involved in the time frame set out.

Q As of this date of this memorandum, were you responsible for the scheduling?

A The Bureau may have laid it out for their working forces, a regular chart which laid out tasks to be completed by a certain date.

Q Were you the person on March 24, 1975, who had ultimate control over any scheduling?

A Ultimate to me would imply the Secretary. I was the person responsible for this project.

Q And for the scheduling of it?

A Yes, sir.

Q I take it then you had the authority to modify the schedule?

A That is correct.

MR. BIALIK: I will ask the reporter to mark for identification as Plaintiffs Exhibit 18 a memorandum, dated November 15, 1974, from the Acting Assistant Secretary for Fish, Wildlife and Parks to the Assistant Secretary for Program Development and Budget, and after it is marked I ask that it

Interior Department sent a response to this?

A No.

Q Who was Jack Horton?

A He was and still is Assistant Secretary for Land and Water in this Department.

Q Are you familiar with any proposal by this Department to President Nixon in 1973 for acceleration of OCS leasing?

A I am not familiar with a specific proposal in terms of the language of a document. I am aware that this Department supported the general concept of accelerating OCS leasing and development and forwarded that support to the White House.

Q Was that in 1973?

A To the best of my recollection.

Q Could you tell me approximately when in 1973?

A To the best of my recollection early in the year, but I don't specifically recall a date. I was not directly involved with the processing at that time.

Q Do you know if this was sent to the White House in a written form?

A I don't know for a fact that it was; I assume it was.

Q Do you know on behalf of the Department who submitted it to the White House?

A No.

Q When you say that the Department supported the concept, had anybody advanced the concept so far as you know to

saw it before.

A 925

BY MR. BIALIK:

Q That is not my whole question. You are wasting my time. I asked if he knew the purpose for which it was prepared and the use to which it was put.

A No.

Q Do you know whether the Department of Interior at any time decided that energy independence was a goal that the Department should support?

A It is a difficult question to answer because the President for whom we all worked during the period of time you are talking about laid out a goal for the administration, and the Secretary in any Cabinet agency, once the goal is established, either supports it or resigns. Secretary Morton did not resign, so we supported the goal.

Q Do you recall when for the first time the President announced that goal?

A No.

Q Are you referring though to a speech of the President?

A I don't follow your question.

MR. HYMAN: How did you find out about Project Independence?

THE WITNESS: To the best of my recollection this Department was engaged in a dialog both before the goal was

January.

Q As of last January 1976, was it still in operation?

A In January 1976 it had the functions I have already attested to. The confusion arises from a second board that was created earlier that year, earlier in 1975.

Q Do you know who Allan Hirsch is or was in January 1976?

MR. HYMAN: Did you ever hear the name Allan Hirsch?

THE WITNESS: He is an employee of Wildlife Service and senior environmentalist.

BY MR. LIKE:

Q Was he the chief of the Biological Services in January of 1976?

A Yes, I believe he was.

MR. LIKE: I will ask the document consisting of three pages, a letter dated January 7, 1976, from Allan Hirsch to Frank E. Clarke, Chairman, Outer Continental Research Advisory Group, be marked for identification and shown to Mr. Hughes.

(Plaintiffs Exhibit No. 22 was marked for identification.)

THE WITNESS: I don't specifically recall ever having seen this letter.

BY MR. LIKE:

Q In your capacity as coordinator of the Outer

Continental Shelf leasing program, did there come to your attention at any time prior to January 7, 1976 any concerns such as those expressed in Mr. Hirsch's letter to Frank Clarke, dated January 7, 1976?

A There was over the period that I was the coordinator for the OCS program a continuing discussion about the nature of the baseline study program.

Q Were there criticisms that came to your attention over the scope, design or quality of the baseline studies program?

A Yes, sir.

Q What were the criticisms that came to your attention and by whom were they expressed?

A They were criticisms expressed inside the Department primarily by the Assistant Secretary for Fish and Wildlife and his agency, the U.S. Fish and Wildlife Service. There were criticisms from outside the Department by some environmental groups and State agencies concerning the need to totally complete the baseline study program prior to decisions being made to lease or not lease in a given proposed area.

Q Tell us to the best of your recollection what the Fish and Wildlife Service said by way of criticism of the baseline studies program.

A In their professional capacity, they felt it necessary to have more information over a longer period of time

and completed studies prior to a decision to lease leases, modified or not at all, in a given area.

Q What type of additional information did they say ought to be acquired and over what period of time?

A It varied from area to area. They basically quarrelled with the idea of the benchmark being adequate for environmental studies from their professional viewpoint.

Q What did they say was inadequate about the benchmark study from their professional viewpoint?

A As I best remember it centered on the cyclical nature of biological and other marine life that lived in given areas. They felt a longer period of time was necessary in terms of data collected before a judgment should be made to lease or not lease in a given area.

Q Did they indicate what period of time should be observed with respect to the collection of data before decisions to lease were made?

A To the best of my recollection, it varied from area to area. The Atlantic had different types of biological considerations than the Gulf of Alaska.

Q What did they say regarding the Atlantic?

A I don't recall.

Q Would there be a document of some type in the Department of the Interior---

MR. HYMAN: Are you asking this witness?

MR. LIKE: Yes.

BY MR. LIKE:

Q Could you tell us where we would have to inquire to determine if there is a document setting forth with some degree of specificity the Fish and Wildlife Service's critique of the benchmark for baseline study for the Atlantic?

Do you know whether or not the Fish and Wildlife is concerned with the adequacy of baseline study programs and did they set down anything in writing?

A To the best of my recollection, their position was reflected in meetings. I am aware of the concerns they have exhibited, but I don't know a specific document that laid it out in a comprehensive fashion.

Q Do you recall being present at one or more meetings?

A It is difficult to answer because I probably attended 50 to 100 meetings the year I was Coordinator.

Q In that cluster of meetings, do you recall being at one or more meetings where the Fish and Wildlife Service presented its position as to the inadequacy of the baseline study?

A Specific individuals from the U. S. Fish and Wildlife Service or the Assistant Secretary for Fish, Wildlife and Parks would normally represent a concern at either the baseline program or the proposed action under consideration or a combination of the two. It is hard for me to separate out a specific meeting where a specific objection was raised.

Q Were the objections that were voiced and that you

heard similar to those expressed in Plaintiffs' Exhibit 22, the letter from Hirsch to Clarke?

A It is a difficult question to answer. I think generally they were concerned about the adequacy of the baseline study program.

Q You have had a chance to read this letter and I will ask you to again look at it and see whether or not this refreshing of your recollection helps you to determine whether the specific concerns articulated by Fish and Wildlife as to the inadequacy of baseline studies are similar to those expressed in the letter.

MR. HYMAN: Is this the letter from Fish and Wildlife Service?

MR. LIKE: Chief of the Biological Services.

MR. HYMAN: What year are you talking about?

MR. LIKE: I am talking about the 50 to 100 meetings Mr. Hughes says he attended during which time OCS subjects were discussed.

THE WITNESS: To the best of my recollection, the arguments offered here are representative of the Fish and Wildlife's concern about the baseline study.

BY MR. LIKE:

Q Aside from the Fish and Wildlife Service, did their come to your attention in your capacity as Coordinator any criticisms of the adequacy of the baseline studies or benchmark

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studies program from other government agencies such as the Environmental Protection Agency, the National Marine Fisheries Service or NOA---

MR. HYMAN: Or CEQ.

THE WITNESS: To the best of my recollection, all of those agencies expressed some concern.

CEQ, as we got into the proposed Alaska sale, was concerned about the adequacy of the baseline study.

BY MR. LIKE:

Q Were those concerns similar to the concerns expressed in Mr. Hirsch's letter, Exhibit 22?

A To the best of my recollection, there was a basic difference of opinion in the baseline program between this Department and other agencies.

Q The basic difference of opinion was between the Department of the Interior, the Bureau of Land Management, specifically?

A The Department of the Interior operated a baseline study program. Its agency was the Bureau of Land Management.

Q Who was the difference of opinion between as to the adequacy---

MR. HYMAN: He did not say adequacy as to the nature.

MR. LIKE: I will rephrase my question.

BY MR. LIKE:

Q Tell us first what the difference of opinion was and

who were the parties who held different views with respect to the issue?

A The Department of the Interior in its OCS leasing program goes through a deliberative 14-point process to write an environmental impact statement which lays out and certainly within the requirements of the NEPA Act environmental impacts. It has been the Secretary's position in this Department at least during the period of time I was the Coordinator for this program that until such environmental judgments could be made as laid out in that document that the decision to proceed with the leasing could not and would not be undertaken.

The baseline study program as an additive program agreed to by this Department in order to establish a benchmark of biological and other type data that existed in a given water column so that over a period of years that benchmark ld be referred back to and subsequently decisions to increase leasing and oil or drilling in a given area could be modified so as to take into account changes which have been made.

The baseline study was never intended---

Q Just a moment.

MR. HYMAN: Let him finish. He is answering.

BY MR. LIKE:

Q I don't want you to lose sight of the question but, again, under the admonition we want to get through today and go to court tomorrow, I am going to try to give you questions

A 934

that are specific enough to answer responsibly without need of a preamble.

You have said there was a difference of opinion as to what the baseline study should be.

A I was trying to explain the difference of opinion.

Q First tell me who were the agencies who had the differences of opinion?

MR. HYMAN: Or people in the agency, not necessarily agencies.

BY MR. LIKE:

Q You have indicated the Fish and Wildife Service had a particular viewpoint with respect to baseline studies. Was that view different than the viewpoint of the Bureau of Land Management?

A Yes.

Q Were there any agencies that you know of who also differed with the viewpoint of the Bureau of Land Management with respect to the proper scope and design of baseline studies?

A Inside the agency.

MR. HYMAN: You just know about purpose. You don't know about scope.

THE WITNESS: I can't testify to the scope of the differences.

BY MR. LIKE:

Q At the moment, if you want to limit your answers in

terms of purpose, that is okay.

Now, within the Department of the Interior, other than the Fish and Wildlife Service, were there any other offices or units that differed with the Bureau of Land Management with respect to the purpose of baseline studies?

A I can't specifically recall any others.

Q At the moment, all you can recall is the Fish and Wildlife Service?

A Thatis correct.

Q Outside the Department of the Interior, you have identified the Environmental Protection Agency, the National Marine Fisheries Service, NOA---

MR. HYMAN: He didn't say anything about NOA. Did you say anything about NOA?

THE WITNESS: It was included in the group.

BY MR. LIKE:

Q You indicated that group also had a viewpoint with respect to baseline studies and the purpose of baseline studies; is that correct?

A They expressed concern over the baseline study program.

Q Would you say there was a difference of opinion between the agencies I have just mentioned -- EPA, NOA, NMFS and the Bureau of Land Management -- as to the purpose of baseline studies?

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A I can't answer it that simply yes or no because it varied from agency to agency as to their view.

Q Was there a difference of opinion as between the Bureau of Land Management and EPA with respect to the purpose of baseline studies?

A I can only specifically recall with respect to the proposed Alaska sale. There was a good deal of discussion with respect to a good deal of difference of opinion.

Q Do you know of a difference between the mid-Atlantic and North Atlantic?

A I can't specifically recall.

Q What was the difference of opinion with respect to Alaska between EPA and BLM?

A Generally, EPA would have liked to have had longer studies over a period of years with a greater collection of samples.

Q Let's move on to NOA. Was there a difference of opinion between NOA and the BLM with respect to the purpose of baseline studies in any of the frontier areas?

A Yes, to the extent NOA wanted to take the program over.

Q Aside from taking the program over, was there a difference as to what the purpose of the study should be, the period of time for collection of data, type of data to be collected, and so forth?

A To the best of my recollection, they expressed similar concerns about the period of time over which the program collected the initial sampling.

Q Did they give any reasons that you are aware of as to why they wished to take the program over?

A Their reasons basically centered on a bureaucratic fight for budget dollars. It was a $50-million program.

Q Did they express anything about their professional personnel having more professional capability of handling and evaluating and designing baseline studies than the Bureau of Land Management.

A They offered those arguments but, in fact, we contracted with them for a good many parts of the program.

Q They offered those arguments?

A They offered those arguments.

Q Was there a difference of opinion between BLM and NOA with respect to baseline studies in any of the frontier areas?

A I am not sure there was a difference as far as purpose was concerned, but as to the purpose, yes.

Q What was the difference between BLM and NOA as to how the program was to be carried out?

A NOA was generally supportive of arguments made by the States and the environmental groups that the program ought to be operated over a much longer period of time.

Q Did they give reasons for that position as to why it

should be operated over a longer period of time?

A Other than statistical accuracy, I can't recall any specific reasons.

Q That leaves us with the category of others. Aside from NOA, EPA and NMFS, were there other governmental agencies that differed with BLM as to the purpose or the manner in carrying out the studies.

A The President's Commission on Environmental Studies expressed some concern.

Q Were their concerns similar to those voiced by the other agencies you have identified?

Do you recall what the concerns were that were expressed by the CEQ that put them in a position of differing with the BLM?

A To the best of my recollection, they expressed similar concerns.

Q Similar to whom?

A Similar to the other people who differed with the Department over the purpose and adequacy of the baseline study program.

Q Were you also indicating that certain States differed with the BLM as to the purpose and adequacy of the baseline study program?

A Yes.

Q Do you recall which States?

A Alaska, California, New Jersey and several of the New England States.

Generally, most of the States that were under consideration for proposed leasing complained to one degree or another about the baseline study program, confusing it with the environmental impact statement process.

BY MR. LIKE:

Q Was there a practice or a custom in the Department concerning the preparation of notices of sale in advance of proposed sale dates?

MR. HYMAN: Do you mean was it done?

BY MR. LIKE:

Q First, was there a normal practice?

MR. HYMAN: Ask him if he ever sold anything. What knowledge do you have?

MR. LIKE: First, I must know if -- he started to say, when he was interrupted, there was a practice here with respect to when a notice of sale is prepared.

MR. HYMAN: Let's get down to the basics.

MR. LIKE: I think I am at the basics. I am trying.

THE WITNESS: There was a practice in this Department following a decision by the Secretary to proceed with a sale as proposed or as modified, or not to proceed if in fact it was the two former conditions either as proposed or modified, the Bureau of Land Management was directed to prepare a sale for that given decision of the Secretary.

BY MR. LIKE:

Q Was this practice reflected in some manual or some policy statement setting forth exactly how you do it, when you do it, and what you do in regards to a notice for sale?

A I don't know for a fact. The procedure was laid down

in the Department manual.

Q Was this the practice that was followed while you were in the Office of Program Coordination?

MR. HYMAN: What was the practice.

MR. LIKE: He just testified what the practice was a moment ago.

MR. HYMAN: Do you mean the Bureau of Land Management?

THE WITNESS: This was the practice followed during my tenure as OCS program planning coordinator.

BY MR. LIKE:

Q Do you know with regard to other lease sales where this practice was followed?

A To the best of my recollection, this practice was followed on each lease sale during my time in the Department.

Q Do you know whether or not this practice was followed in the case of Mid-Atlantic sale 40?

A No.

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fls.

A I don't recall that. As I recall, the President just came back from California and just had a meeting with Governor Brown so the discussion on the California sale was a logical follow-up.

Q Mr. Frizzell also testified from time to time he had discussions with Glen Schleede of the Domestic Council regarding the OCS.

Did you ever have conversations with Mr. Schleede?

A Glen Schleede was the staffman for the Domestic Council. The answer is yes.

Q Were these conversations between you and Mr. Schleede held between September 29, 1975 ---

A Both before and after.

Q Do you recall on how many occasions you had discussions with Schleede?

A On many occasions.

Q Many occasions?

A Yes.

Q Did you ever discuss with him the accelerated leasing program?

A I can't specifically recall but I am sure I did.

Q Do you recall whether or not there were any written communications between you and Schleede concerning the accelerated leasing program?

A I can't specifically recall written communications.

Q Do you recall Mr. Schleede ever expressing an interest in the decision to accelerate OCS leasing and when such decision would be rendered?

A Mr. Schleede is an agent of the President's immediate office, was interested in knowing what the time table was for construction of the PDOD's circulation.

MR. HYMAN: Irving, you have a minute and one-half and the man is then leaving.

BY MR. LIKE:

Q When was the last conversation you recall you had with Schleede before September 26, 1976 at which there was a discussion of accelerated leasing?

A I couldn't recall.

Q Was it sometime after August, 1975?

A I can't specifically recall. I talked to Schleede regularly.

Q What was said by you or him about accelerated leasing when you spoke to himon one or more occasions?

A It was basically the discussions where discussions in the context of my keeping him advised of where we were in the process.

Q What did he say to you and what did you say to him?

MR. HYMAN: Can you be more specific?

MR. LIKE: He said he spoke to him on many occasions and in some of those instances Mr. Schleede expressed interest